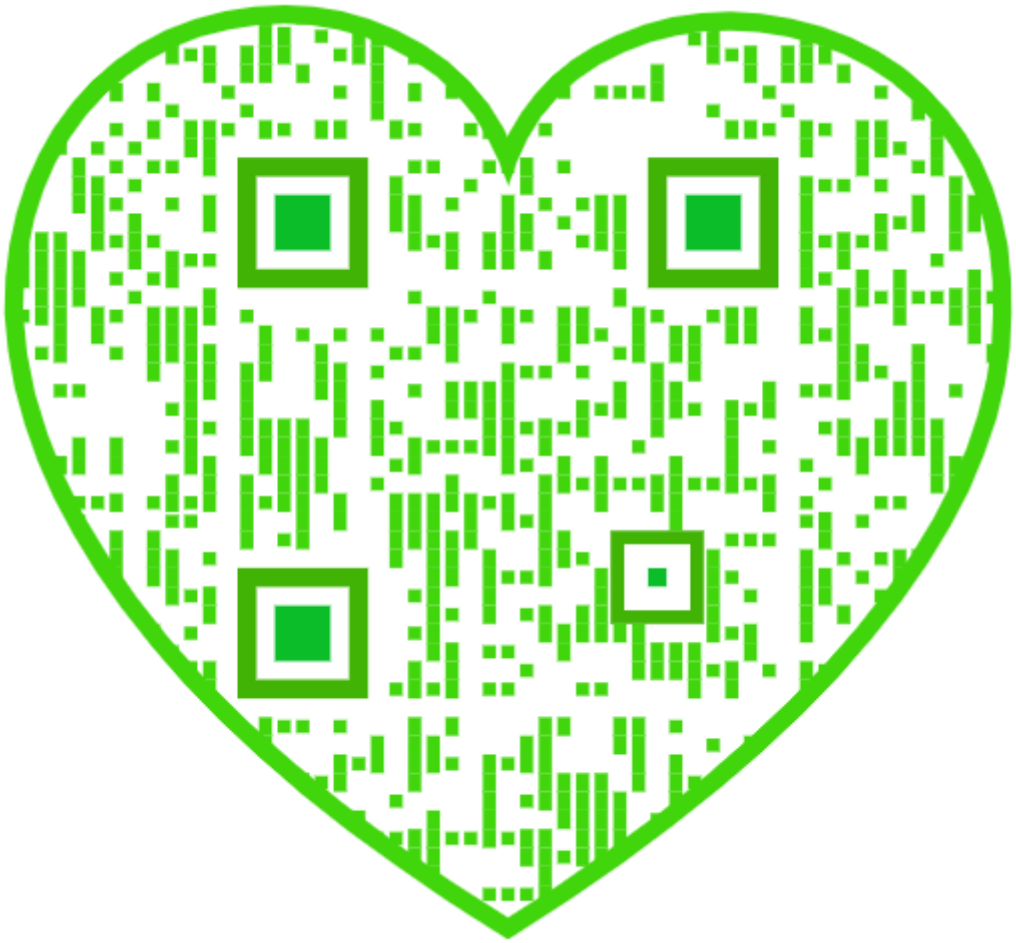

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RUNNING FIRE

by MARK DANIELS, A.I.A.

Mexico

The last time I was in Mexico City, before the visit from which I have lately returned, was fifteen years ago. In some ways the change is great; in others there is none, or it is hardly noticeable.

In '24 the hotel accommodations were abominable. Today there are several excellent hotels. There is very little night life in Mexico these days. The city that was once called the "Paris of America" now might share that title with Oakland, California, as far as night life is concerned. Yet an observant visitor cannot fail to see and feel the kinship of plan and pattern in the layout of the two great capitals.

Of the government-operated churches and museums, the dissected haciendas, municipal and state administrations, prices of food and commodities, law and order, much could be written but would appear more appropriately in a magazine devoted to political or social science, or law and economics. Further, it might be safer for an architect to stay in his own dung heap. I'd rather do that—it's so warm and comfortable.

First that will be noticed by the architect is the surprising number of "moderns" in both commercial and domestic structures. In the latter field there are literally hundreds that have been built in the last two or three years. A great many are under construction today. Thinking of Mexican architecture as being a cavalcade of plateresque, Churrigueresque, baroque and rococco, many architects fail to note the natural drift from the simple functional cube units of the adobe brick dwelling to the more refined, yet equally straightforward and functional, dwellings of today in Mexico City. Overlooking the fact that the modern is little more than a refined primitive, the first thought is that these houses of today in Mexico must clash frightfully with the ornateness of the mixconceived style of the country. On the contrary, these new "moderns" take their place very well in most instances. There are enough of the old primitive, cubistic dwellings to make the new style (if it can be called new) look very much at home.

I cannot say as much for the more monumental buildings. They are fewer, of course, but if there were more they might look just that much more out of place. Practically all of the monumental buildings in Mexico City are in one Spanish style or another. Some are extremely restrained and beautiful yet cannot be harmonized with what we now think of as modern.

In decorative art I was surprised to learn that the Diego Rivera style was losing its popularity. I had expected to find that Rivera was held only second to Juarez as a savior of the country, but I met with indifferent shrugs whenever I asked about him and his work. As to national heroes, Juarez would seem to be toppling, for the famous statue to him is now called the Paul Muni statue.

Sooner or later we shall learn that Mexico is our great neighbor and when we do we shall have taken a long step forward.

★ ★ ★

Don't Look Up

The Hastings clothing store has been remodeled of recent days. The display windows are neatly done by architect Douglas Dacre Stone who designed the treatment for the first two stories. There is enough exposed brass (metal) to satisfy the moderately-demanding modern in architecture. Above the first two floors, however, the modernizing treatment has been abandoned, architecturally, and replaced by a series of about the ugliest signs one could find in this city of paradoxes.

Some people seem to be of the opinion that if one scarf-pin in a neck-tie is beautiful, two scarfpins in the same necktie should be twice as beautiful. In the case of the Hastings building it would seem that the owners operate on the theory that if one sign over their doors will draw business through them, twelve signs should draw twelve times as much business. It does not seem to have occurred to them that if a nose two inches long looks beautiful on a certain face, if it were six inches long it would not be three times as beautiful.

It is a pity that the warehouse style of exterior ornamentation shall be reintroduced into what is rapidly becoming the most stylish shopping center in metropolitan San Francisco. The building looks much like a man who has put on his patent leather shoes and full dress trousers with nothing above the waist but an old red flannel shirt, decorated by twelve placards that are designed to indicate his height. The treatment of the upper stories of this building may seem to be naive to some but to my eye they are hideous and most offensive and particularly reminiscent of the warehouse advertising of the late nineties.

★ ★ ★

More About Housing

A few months ago I wrote a bit about Chinatown, and now I have just noticed a report on housing that has an interesting quotation: "Anyone takes a chance of losing his or her life, money and virginity by walking anywhere in the south of Market area around Third Street after dark."

This section is the second worst in San Francisco for tuberculosis (Chinatown being first). Dr. Sappington, Dr. Geiger's assistant director, informed me that headquarters for a Venereal Disease Clinic was at 680 Howard Street and this should be a pretty good indication of conditions in the district.

Chinatown has received a dash of publicity hardly in proportion to the conditions there: Calvary Cemetary has received even more publicity—but what appears to be our second worst section in downtown San Francisco has not been mentioned above a whisper, to the best of my knowledge. Our famous "Skid Row," with its sherry bums, its "Got a nickel for a cuppa coffee" soldiers, is right next to the triangle shopping district, the business houses, and Market Street—from millionaire to moocher is but half a minute, and even less if our slipping friend has wandered.

We should do something in this area to add to the enjoyment and size of the shopping district, the safety and pleasure of the pedestrian. Also, Third and Townsend station visitors might have a pleasant ride on the street car to the more metropolitan area.

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ARCHITECT AND ENGINEER

OCTOBER, 1939

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Myron Hunt and H. C. Chambers, Architects

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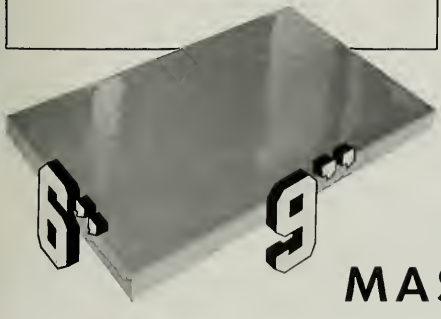

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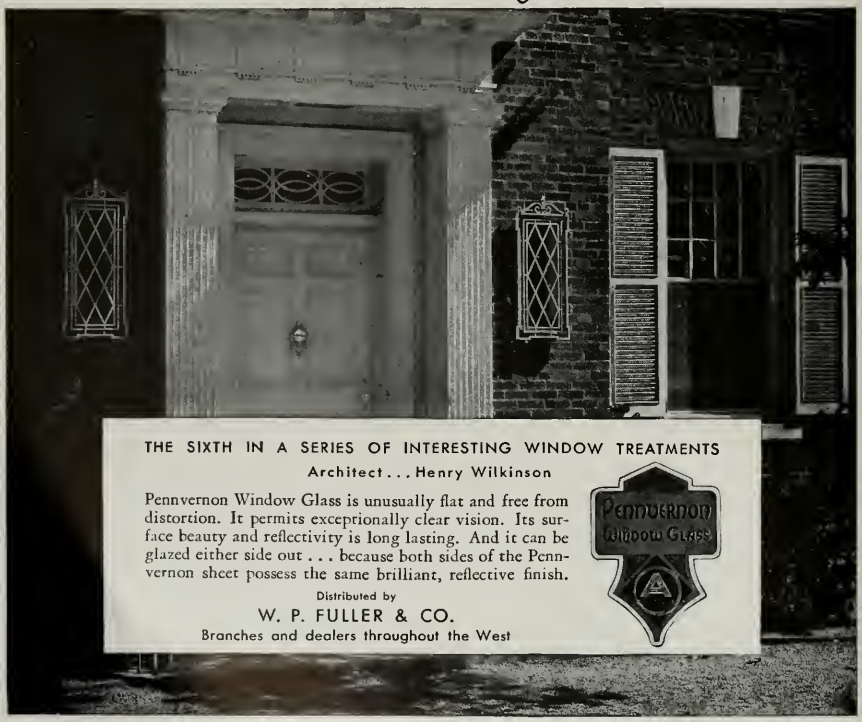

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ROADSIDE BEAUTIFICATION—BEFORE AND AFTER

LANDSCAPING CALIFORNIA STATE HIGHWAYS

By DANA BOWERS, Landscape Engineer

HIGHWAY landscaping has been the recipient of much criticism of a various and sundry nature, some of which has justification. It is to be noted, however, that the constant demand for improved roadside appearance, together with the apparent economic value of properly applied landscape features, is steadily becoming more noticeable in general highway construction.

Following some ten years of trial, the original conception that roadside development, or "roadside beautification" as it was commonly termed and consisting principally of the planting of trees, shrubs and flowers, is gradually being discarded for the broader, more appropriate and practical concept of roadside development which strives for a more harmonious setting of a necessarily formal roadway into the contours of the landscape.

During the past years we have learned more of the physical and economic limitations of roadside development. We can not compare our State highways with parks or backyard gardens. The fact that Mrs. Jones has a most beautiful display of flowering peaches in her yard, flourishing "with no care at all," is no criterion for their general use along roadsides. The same applies to wild flowers and many other varieties of plants. Nature designated certain locations and conditions for various types of growth. When deviations are made from these natural laws, unlimited maintenance not possible on the highway must be available, or these plants soon fade away.

The average commercial State highway can not be compared to State or Federal park roads, for strange as it may seem, even though we may deal with much the same class of people that use the park roads, the use of State highways is under entirely different conditions. It is not surprising to see a tourist mother bathe her baby or do the family washing in a State highway drinking fountain. Yet acts of carelessness such as these are a rarity in our Federal and State parks, probably because the majority of the people that visit these parks are not necessarily of a more appreciative nature and therefore more considerate of the efforts made for their convenience and pleasure, but because they are more impressed and familiar with the more obvious recreational facilities they encounter in a concentrated park development than on a landscaped highway.

The Division of Highways is continually requested both by private and civic bodies to increase activities in all phases of roadside development. Of course, the opportunity to provide many types of roadside development is fully recognized. Beautiful picnic spots with sanitary conveniences, and small roadside parks, some with facilities for bathing and boating, could be developed. However, many of those making such requests have but little conception of the magnitude of such an undertaking and are aware of few of the problems and the expense involved.

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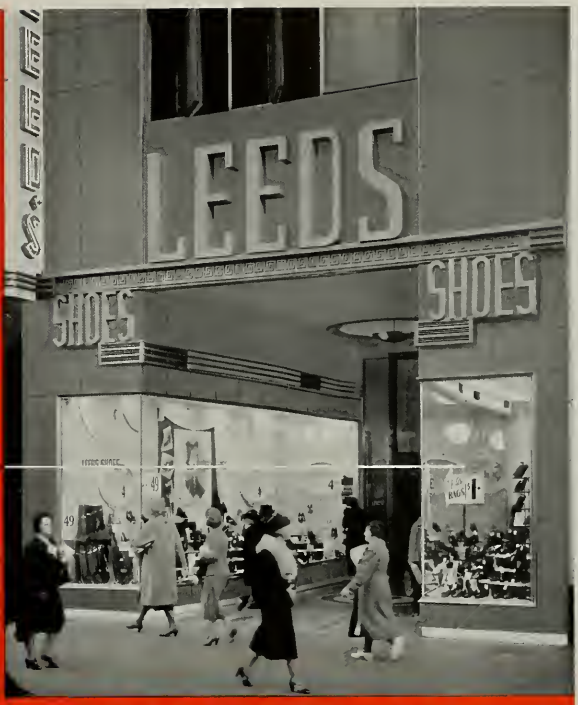

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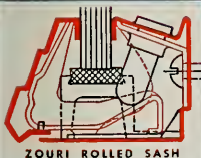

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LANDSCAPING CALIFORNIA STATE HIGHWAYS

(Continued from Page 8)

There is the question, too, whether the State Division of Highways, whose duties are definitely prescribed by law, can properly engage in activities that are primarily a park problem. Mainly, however, the cost of continual cleanup and repair of damage, caused by a careless few, prohibits at the present time any ventures into such a field of roadside improvement.

In general, very little planting is or should be necessary where favorable conditions exist, for there natural coverage usually flourishes. We are often reminded of the fine planting work accomplished by many of the eastern states, but it should be remembered that the ample summer rainfall that prevails in the East makes irrigation seldom needed, whereas in this State plant life develops slowly unless constantly fertilized and watered. Even the use of native vegetation, under the most favorable conditions, is often discouraging and brings criticism because of the years required before any effect is evidenced.

In view of these facts, the Division of Highways has curtailed endeavors along the line of prolific and formal planting and is concentrating on the more basic principles of roadside improvement. It is not always necessary to "gild the lily," for after all we have a naturally beautiful landscape in California, and a road fitted to that landscape needs very little further adornment.

Principally we have one objective in the improvement of highway appearance and that is—harmony. A road blending into the natural contours and covered with endemic vegetation can evoke little criticism from a landscape viewpoint. Harmonious construction, however, is excellent in theory and looks well in the artist's sketch book, but it can easily be carried beyond practical limits. There is much involved in the construction of highways that is of more importance than appearance alone.

To consider that adequate and safe transport lanes can be provided without scarring the landscape is futile. True, there is always a location, if such is sought, which offers a minimum of scar, but considering the general terrain in this State, plus the demand for higher standards of alignment, grade and road width, some scar is inevitable and even the minimum is apt to be inharmonious.

Since the quest for harmony has an economic limitation, we must be satisfied to strike an agreeable medium and proceed on that basis. It then becomes a matter of sensible roadside landscaping to heal these scars, for if this is not done, any efforts or expense to which we may have gone during construction for the sake of harmony will have been wasted.

(The second installment will appear in the November issue.)

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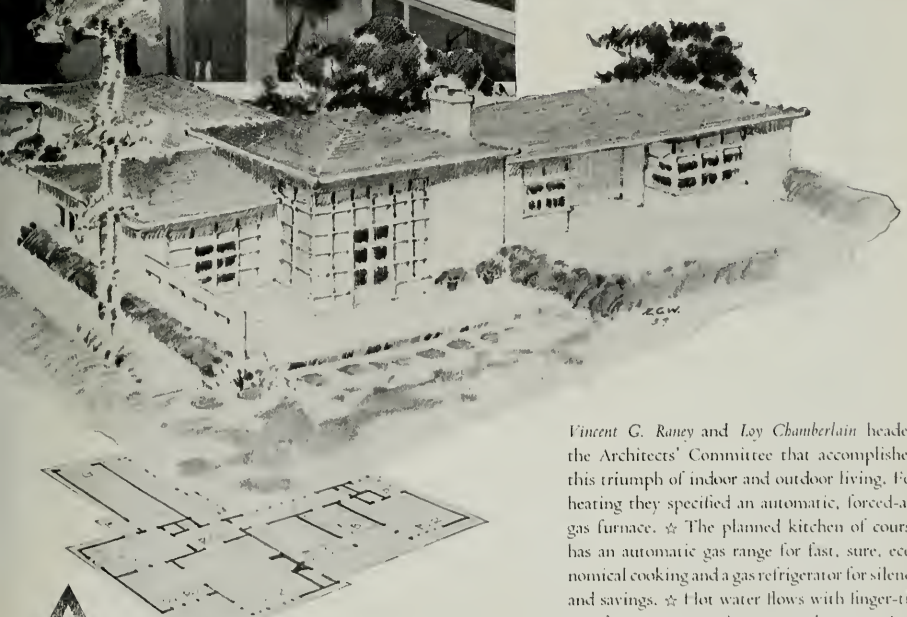

Vincent G. Raney and *Loy Chamberlain* headed the Architects' Committee that accomplished this triumph of indoor and outdoor living. For heating they specified an automatic, forced-air gas furnace. ☆ The planned kitchen of course has an automatic gas range for fast, sure, economical cooking and a gas refrigerator for silence and savings. ☆ Hot water flows with finger-tip ease from an automatic gas water heater. ☆ *Your* architect and builder will approve your choice of gas for these same big jobs in *your* home.

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ARCHITECTS AND LUMBER INDUSTRY

The Editor:

Comments concerning lumber and its manufacturing industry in Mr. Orr's article in Architect and Engineer, are both commendatory and deprecatory. Both are undoubtedly justified. Truthfully, however, the industry is sincere in its efforts to maintain a place of high responsibility with architects and other components of the construction industry. To this end, recommendations from architects themselves as to required data, cooperative services and closer relationships, are welcomed and heeded.

Lumber in this twentieth century has perhaps had an unfortunate heritage. Here was a leading building material which attained full bloom long before technological requirements became paramount. Required sizes, strength and details had been primarily in the heads of craftsmen who provided efficiency and safety through long trial and-error experience because laboratory recommendations and industry standards did not exist. Today, lumber is technically determined to an enviable extent. Unlike the materials which came into prominence during a technical age, the interim progress necessitated recognition of many habits and utilization practices which existed before the advent of timber technology. And even today, a frame house is as much the solution of a problem by converging approximations as it is by modern rigorous design. There are many justifications for this type of evolution; nevertheless, progress is continuing.

Fabrication of lumber on the job, with the resultant scrap pile, is of course standard practice with light framed buildings. The ease of such operations is a strong economic factor in their favor. Shop detailing and fabrication must show savings to gain precedance. . . .

In the field of heavy timber structures, shop fabrication has become the order of the day, particularly since the advent of modern timber connectors. Architects and engineers have played a prominent part in both the light and heavy framing developments.

Today's lumber industry activity in home construction is in the form of the National Small Homes Demonstration and in the northwest, Western Homes Foundation. Here is leadership with full participation by other organizations and individuals of the construction industry. The avowed purpose is to stimulate activity in districts which need it, to show through actual accomplishment that excellent low-cost homes are obtainable through normal channels.

We often hear that architects are not interested in low-cost houses of the type which represents the volume of today's market—that no adequate answer has been found for applying the architect's much needed services to $25 per month individual housing. Is a practical answer in the offing? Understand, I am not defending the plan books of yesteryear but am serious to learn of a happy solution to this much discussed point.

West Coast Lumbermen's Association will welcome requests, comments, and recommendations. If round table discussions of individual and mutual problems might assist in both progress and better understanding, such should be undertaken. If a different type of file data would prove helpful, it should be programmed. It would be fine for both architects and lumbermen to know that they are headed in the same direction, following a common course toward a designated objective, with complete liaison and support.

Sincerely yours,
West Coast Lumbermen's Assn.,
THEODORE C. COMBS.

DIVISIONAL PRACTICE FOR ARCHITECTS

The Editor:

If the dropping of Architects Bill S. B. 186, brings about some form of classified registration in its place, there will be every reason for satisfaction.

Some years ago, at a State Association meeting the question of an upper and lower bracket for architects vanished in a gale of laughs, when a quizzical voice from Long Beach, asked if there was any lower form of life than an architect.

I am happy to see Architect Robt. H. Orr treat the subject seriously. . . . Registration Acts, domestic and foreign, take in too much territory by covering all branches of architectural qualifications with one certificate. Exceptional buildings such as skyscrapers, and the architects with that class of experience are not numerous. . . . Many good men have never worked in any capacity on tall building design in actual practice—or ever expect to do so. Under the single certificate system however, an examination must include such extremes and so debar many who are well qualified for limited practice.

It may be true that construction in particular is basically alike for cottage or castle . . . but actual applications are tricky and too dependent on judgment or hidden facts for test by any wide-open range of questions.

In any event, why should legal recognition (and livelihood) depend on tests beyond the field of a candidate's expected practice Voluntary limitation of this field is reasonable and brings candidates more definitely within scope of qualification tests. . . The profession appears to justify three divisional certificates at least, and possibly a fourth, viz:

A. Full license, with examination much as at present.

B. Honorary certificate (non-practice).

C. Limited license, with class and cost restrictions.

A fourth division D, too, confined to residential practice, would clear the field for better classification of the limited division C. Divisions should qualify towards a later full certificate. . . . The honorary class is desirable in California, to permit non-practicing architects of standing, resident here for scholastic, retirement, health or similar reasons to use the title architect. . . . The present restriction is a useless plight in such cases and robs the State Board of a gracious opportunity to compliment or welcome distinguished architects. . . . Old-timers will remember more than one sad situation that could have been nicely bridged by an honorary certificate. The name earned by life-long devotion to one's profession means much, and its legal loss is harsh and intolerable; non-action is insufficient.

Mr. Orr's suggestion on young architectural associates for practicing architects is worth while and could be put into voluntary operation without waiting for a new Act. The State Association could create such a recognition for men now doing responsible work in various offices, without due professional standing. The earlier proposal by Mr. Orr (July 14, 1939), that young architects enter the building field, has merit if it does not degenerate into architect-builder activity; the latter is dangerous ground for young men and bleached bones are piled high, of those who have tried it. Combination men, soon find themselves nobody's friend, for the old-time reason of sitting on too many stools. If a young man wants real experience in practical building and keep face, he should build and finance a modest job himself under the present favorable conditions, and evade both the complications and responsibilties attendant to serving a client.

One fact not sufficiently noted by the entire building industry, is that the old-fashioned owner and client is about extinct. . . . The modern client knows most of the tricks, is full of half-truths caught from the direct-to-owner sales-appeal methods of merchants and magazines, and above all is alert to take a legal crack at anyone whose foot may slip on technicalities. . . . There is need for greater cohesion, and recognition that the menace of the future is outside the industry. It is not a question of who does which part of what job, but of all-together leadership and loyalty in avoiding the risks of reckless promotions, unsound finance, and the long line of dishonest manipulations that have cursed building operations for years past.

These things would diminish rapidly, with cooperation and fair play—most of which centers on orderly planning and less subdivision of responsibility. The architect is not only the executive keystone of the building system but is largely the mainspring behind the delicate procedures, which end in that "order for the job" from which so many people earn a living, and might not, but for his foresight and downright hard work. I have long been convinced that the Divisional License for architects is a major step to unity and renewed confidence. . . . It is doubtful that definition of division limits, will prove really difficult, once the problem is tackled seriously.

CHARLES CRESSEY, Architect.

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HOUSE THAT WON $1,000 PRIZE

HAROLD J. BISSNER, OF PASADENA, ARCHITECT AND OWNER
Pictures show general exterior and outdoor patio

THREE Californians were among the fifteen builders and architects who were awarded prizes in the recent nation-wide American Gas Association all-gas home competition. One of them, Harold J. Bissner, architect of Pasadena, received one of the five $1,000 first prizes, and the other two, Aubrey St. Clair, architect of Laguna Beach, and Raymond Stockdale of Los Angeles each received one of the second awards of $500. The contest was for the actual construction or reconstruction of a home in which gas is used for the four major purposes of cooking, water heating, house heating and refrigeration.

Any builder, either individual or corporate, or any architect, with a builder's permission, was eligible to compete. Its purpose was the development of better homes and better home values. No particular style of home was favored over any other, the insistence on modernity being only the sense of comfortable living. Any home that was completed or modernized in the two-year period ending July 31, 1939, was eligible.

Over 2,000 entries were received from all parts of the United States and Canada. Sixty-eight entries were submitted by California architects and builders.

The dwelling which Mr. Bissner submitted is a home he designed and built for himself on North Foothill Boulevard in Altadena, California. Situated at the foot of the old Mount Wilson toll road, the location commands a magnificant view of the Sierra Madre mountain range. The architect chose redwood for the exterior, which he left natural in order to make a blend with the chaparral covered mountain background.

In the design he sought convenience, livability and adaptability to site; such things as prevailing winds, outlook and use of material were carefully considered in the placing and relationship of rooms. Window areas were concentrated so as to avoid too many scattered windows and too little wall space for the grouping of furniture.

The architect chose a light-weight reinforced concrete slab for the flooring, due to the prevailing rocky composition of the site. This eliminated a great deal of excavation. Carpeting was satisfactorily laid over this concrete in all rooms except the kitchen and baths.

All wall and ceiling areas were completely insulated with rock wool, both for summer and winter comfort. Wide eaves not only play a part in the reduction of summer heat by shading the window openings, but also keep the rain from beating in during the rainy season.

A forced air gas unit supplies heat, and modified summer air conditioning is secured through this same unit.

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THORNE HALL, OCCIDENTAL COLLEGE, LOS ANGELES, CALIFORNIA

MYRON HUNT AND H. C. CHAMBERS, ARCHITECTS

ARCHITECT AND ENGINEER
VOL. 139 OCTOBER, 1939 NO. 1

OCCIDENTAL COLLEGE A WELL PLANNED INSTITUTION

By PAUL R. HUNTER

OCCIDENTAL COLLEGE is one of the few educational institutions in the United States that has been developed entirely under the direction of one firm of architects. So satisfying are its buildings, harmonious in appearance and uniformly high in their design quality, that one wonders why other institutions have not followed a similar program.

The 150 acre site was selected in 1910 by Myron Hunt as the choicest spot in the vast rolling barley fields that lay midway between Los Angeles and Pasadena. A comprehensive plan was laid out for the campus at that time, although only three buildings were built at first: a library and two classroom units. During the intervening thirty years of growth the college has been provided with dormitories, athletic facilities, a student union, a Greek theater, and homes for faculty members,—all orderly arranged in the general plan and conforming to a modified Italian Renaissance style of architecture.

There has, however, been a definite need for an assembly hall large enough to accommodate the student body of 800. This need has been recently satisfied by the completion of the Belle Wilbur Thorne Hall, a gift to the college by Charles H. Thorne of Pasadena in memory of his wife. The location of the new building is imposing, placed on high ground at one end of the eucalyptus lined main cross axis of the campus. It is constructed of concrete and finished with a warm cream plaster. The roof is of small Mission tile. The building is preceded by a landscaped forecourt with olive trees flaking either side.

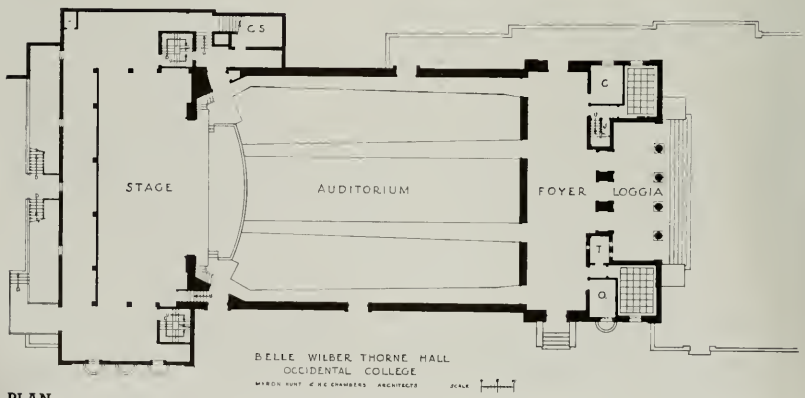
In the interior the auditorium has an oak wainscot to about one-third the height of the walls, with the remainder in Calicel, an acoustical material resembling limestone. The ceiling is paneled in redwood, matching the wainscot in color. The west wall of the auditorium has high clerestory windows, which even when heavily draped, admit sufficient light to give the effect of an illuminated interior. The aisles are carpeted and the seats are upholstered in a rich red mohair. The acoustics have been pronounced practically perfect by Richard Bonelli, distinguished baritone of the Metropolitan and San Francisco Opera Companies.

The auditorium has been designed to seat a thousand persons, while the stage has ample room for a full symphony orchestra. The building is used for a multiplicity of purposes: assembly hall, chapel, theater and classroom for the department of speech. Radio equipment has been provided more for the latter, so that a student's recitation may be recorded and if desired immediately repeated over the loud speaker. The auditorium also has a fine Skinner organ, the gift of another donor. Beneath the stage are rooms for robing and for training choruses, while on the levels above are dressing rooms, classrooms and the office of the manager. The foyer has been planned as an exhibition gallery for pictures and drawings.

Completion of this building enables Occidental College to present more lectures and concerts to the public than heretofore. It is now possible for the college to offer in a fuller measure to Pasadena and Los Angeles the developments in the field of the liberal arts, such as the California Institute of Technology offers in science and the Huntington Library and Art Gallery in culture and research.

OCCIDENTAL COLLEGE. LOS ANGELES, CALIFORNIA

THORNE HALL AND MUSIC BUILDING



PLAN

MYRON HUNT AND H. C. CHAMBERS, ARCHITECTS

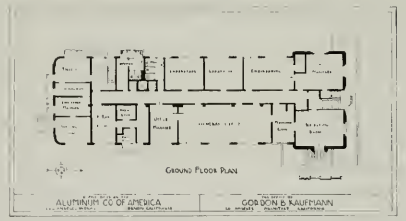
DETAIL OF FACADE

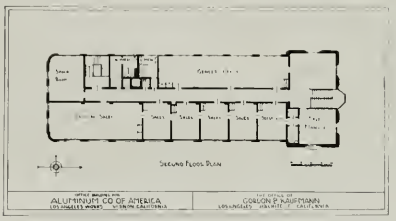
Person & Hollingsworth Co., Contractors

INTERIOR

ALUMINUM CO. OF AMERICA, LOS ANGELES

GENERAL VIEW





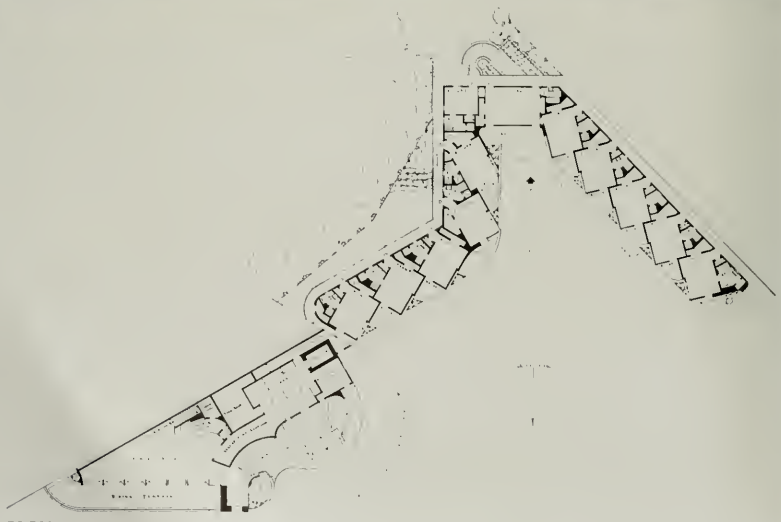
PLANS

ENTRANCE DETAIL, BUILDING FOR ALUMINUM COMPANY OF AMERICA

CARL'S SEA AIR CAFE, SANTA MONICA

GENERAL VIEW

Anton Jensen, Contractor



PLAN

DETAIL

INTERIOR

ETHYL GASOLINE CORPORATION, LOS ANGELES

Meyer Bros., Contractors

The Los Angeles office of the Ethyl Gasoline Corporation is the company's largest branch. It has developed the dynamometer system of testing and adjusting motor car engines to secure peak performance with Ethyl gasoline.

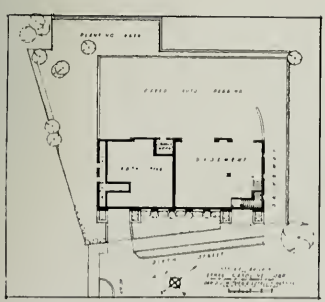
To advertise this system and house the corporation's local activities, the building was erected upon a conspicuous site on the crest of a hill close to the downtown business district.

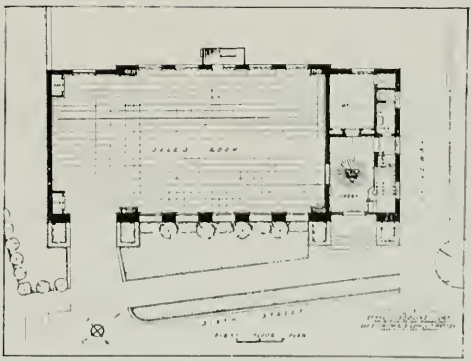
A private drive slopes down to the parking yard and shop in the basement. The main floor contains lobby, dynamometer room, field office and toilets. The second floor houses the administration offices.

The construction is reinforced concrete, cast in plywood forms. Exterior and details are natural concrete. Interior walls of main floor are concrete with a textured surface secured by lining the forms with Celotex. The dynamometer is set flush in the floor of the demonstration room, which is large enough to test and adjust the largest motor bus.

ENTRANCE VESTIBULE

BASEMENT AND FIRST FLOOR PLANS





STUDENTS REJUVENATE "MAIN STREET"

Portion of redesigned Main Street

A typical Main Street before "Facelifting"

Portion of a block in chain store section

STREAMLINING IN ARCHITECTURAL EDUCATION

By PROFESSOR CLAYTON BALDWIN

WHILE face-lifting has remained almost exclusively the right of ancient dowagers and movie queens, the students from the College of Architecture of the University of Southern California have boldly usurped this practice to their own needs. In short, they have eradicated the double chins, the pouches and the age lines of a group of buildings in the city of Santa Ana.

Under the supervision of the author, the class in question (with Santa Ana's permission) undertook the operation of rejuvenating several blocks in the business district of the Orange City. As a matter of fact, a whole semester was taken up with this idea. The results, as shown by scale models and drawings, were very encouraging.

While complacent Santa Ana was the first small city to be used as a guinea pig in the architectural experiment, the work was not limited to that city's problem alone. The class felt that this idea could be practically applied with proper study to any "Main Street" from Podunk Center to Plainsville.

As a serious group of prospective professionals, the students would not think of calling this a face lifting experiment, but referred to it as a rejuvenation program. However, no matter what it is called, the work was designed to fit the practical needs of the future in creating better business and thereby helping the employment situation of that community to say nothing of the aesthetic ideals involved.

The value of the project to the students came through their personal contacts with business men, including bankers, realtors, lawyers, not to mention the butcher, the baker et al. The Mayor was contacted, civic leaders were approached and the city's two daily journals competed for news scoops.

Santa Ana was chosen inasmuch as this community found it advisable to redecorate rather than replace existing buildings on an economic budget plan. The amounts expended in face lifting of certain sections of the business center had to be kept to a specified minimum.

The approach to the problem was to obtain the actual dimensions and the true elevations with structural conditions noted of the building in question. For this rather practical experiment the class was divided into three groups, thus permitting the students to fit into a phase of the work in which they were especially qualified. These groups were called "Maps and Statistics," "Models," and "Drawings." Each team was assigned special objectives by its captain.

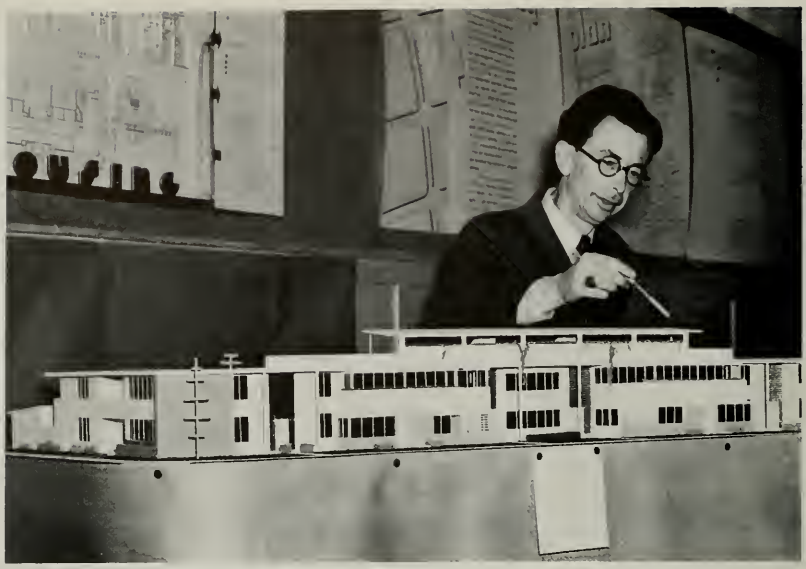
To the "Maps and Statistics" group was given the task of obtaining and making maps meeting the following requirements: the business section of Santa Ana fifteen years ago, locations of modernization, and a visualization of the estimated growth fifteen years hence. Other maps met the problems of present valuations, a proposed change in a highway, and a scheme for up-to-date parking facilities.

The "Drawing Group" drafted plans and elevations of the present and proposed buildings. Drawings and renderings were also made of certain buildings or stores, showing the interiors and exteriors, including the details of special lighting of shop windows.

The "Model Group" had the most difficult task, as they were required to depict in three dimensions, the results of the combined efforts of the class.

With an abandon, possible only when spending someone else's money, the class enjoyed a ripping time changing Santa Ana's wrinkled but highly honorable face.

Following the Santa Ana project and encouraged by its success, an entirely different idea was developed that would also give the students a perspective of reality.



Professor Clayton M. Baldwin, U. S. C. College of Architecture, explaining model of 16-family apartment house.

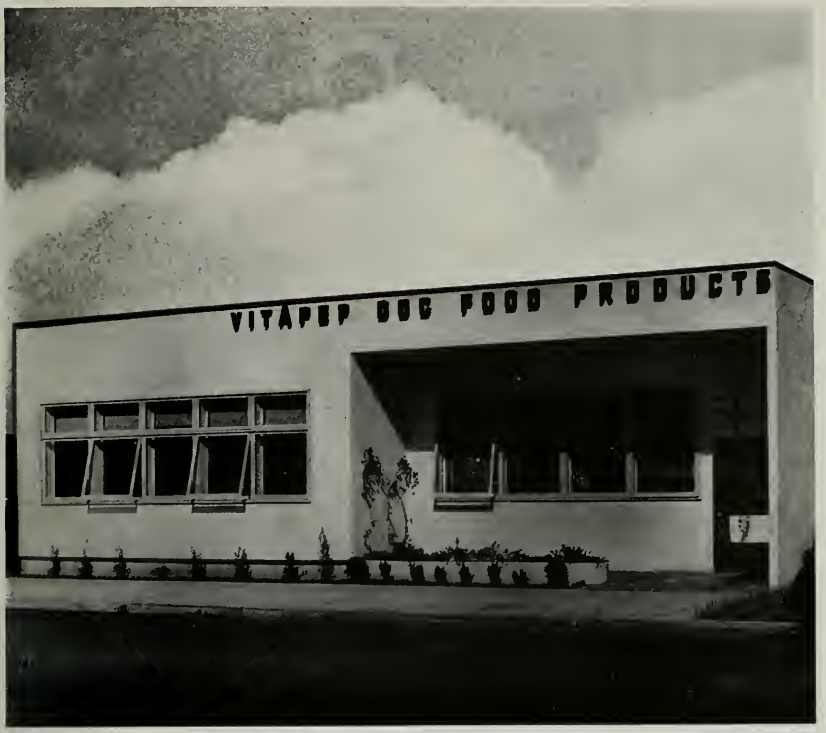
A subdivision within a few miles of the University was selected as the locale, and four adjacent vacant lots in the tract served as the experimental field with "Multiple Housing" the theme of the program.

The class consisted of twenty-five second year students who were divided into five teams of five men each with a captain or job leader heading each group.

First a critical survey was made of the tract to ascertain land value and approximate cost of existing housing and types of apartments that were prevalent in the neighborhood. The average income per family of those living in the district was established. The proximity to schools and markets was also noted as important facts to be considered. This preliminary information was written up and neatly arranged in a brief to be discussed in class and later to form a part of the final problem.

The next step was the organization of each group to prepare a preliminary plan and a small scale model to be completed on a specified date and at which time an officer of the subdivision was invited to talk to the class and give his practical observations of the work. Following this development, the stage was set to make the completed drawings, models and cost layout. The latter was an important part of the problem because it gave the basic facts including total investment, taxes, upkeep, depreciation and also attempted to prove that the venture was a reasonably profitable investment. The entire project was completed in eight weeks with five interesting solutions.

It is obvious that this type of architectural training should give the student a basic outlook on architecture as something that is more than just drawing pretty facades and incoherent plans, because he is now placed in a position to work with his fellow students and develop leadership if he so desires. He is also confronted with questions that must be solved collectively and he enters into discussions that should make him alert to the conditions of today and not, as under the old school regime of the Beaux-Arts Analytique, to adapt problems of ancient Greece and Rome.



BUILDING FOR VITA-PEP DOG FOOD PRODUCTS, LOS ANGELES, CALIFORNIA

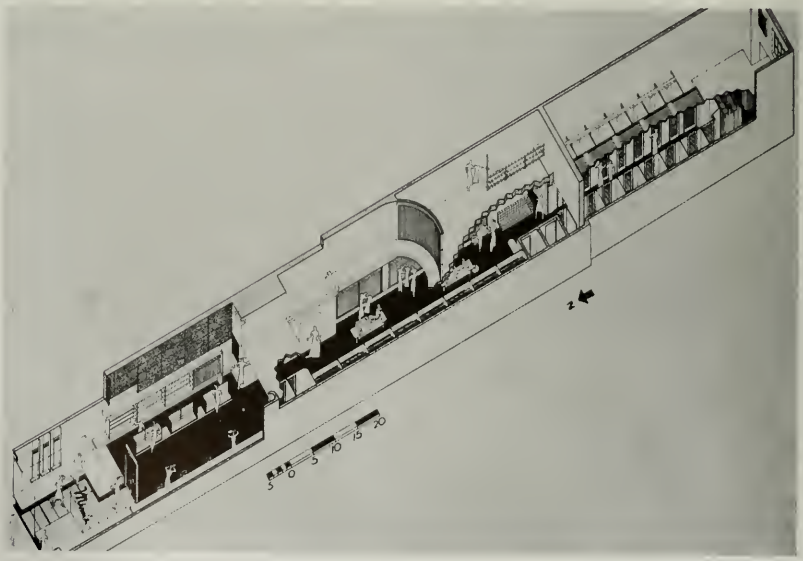
DETAIL

ENTRANCE

MIMI'S DRESS SHOP, HOLLYWOOD, CALIFORNIA

General view, looking toward the Dress and Coat Salon.

Below—perspective

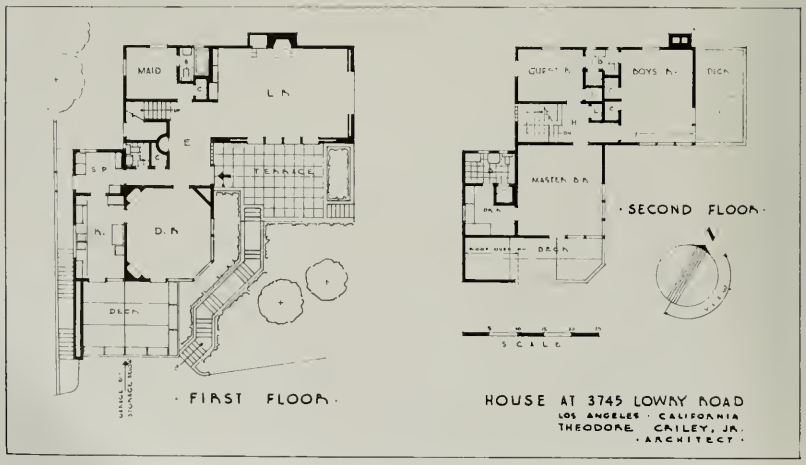


Show window from interior

Dress and Coat Salon

HOUSE FOR THEODORE J. CRILEY, JR., LOS ANGELES

STREET FRONTAGE



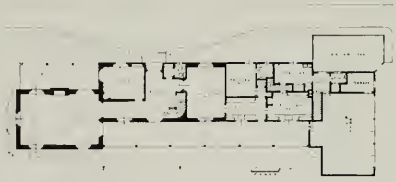
PLANS

LIVING ROOM

ENTRANCE TERRACE

ENTRANCE HALL

RANCH HOUSE FOR C. T. HOLLAND, GOLETA, CALIFORNIA



PLANS

INSTITUTE CONVENTION DRAWS RECORD ATTENDANCE

DELEGATES from seventy-one Chapters attended the 71st Convention of the American Institute of Architects in Washington, D. C., in September. Many foreign architects who had come to the United States to attend the Fifteenth International Congress of Architects, postponed because of war in Europe, were also in attendance.

Federal public works, housing, development of rural districts, city planning, contemporary architecture, architectural education, architectural competitions, and unification of the architectural profession were the chief themes of the convention sessions, which began Monday morning with an address by Charles D. Maginnis of Boston, president of the Institute.

The Producers' Council, national organization of manufacturers of building materials and equipment, held its sixteenth semi-annual meeting in conjunction with the convention. Annual meetings of other organizations related to architecture were also held during the week, including the State Association of Architects, the Association of Collegiate Schools of Architecture, and the National Council of Architectural Registration Boards.

Besides President Maginnis, speakers at the opening session of the convention included Edwin Bergstrom of Los Angeles, treasurer of the Institute and new president-elect, and Charles T. Ingham of Pittsburgh, secretary.

Frederick H. Meyer of San Francisco, 1939 vice-president of the Institute, presided at the Monday afternoon session.

Dr. Walter R. McCornack of Cleveland, Dean of Architecture at the Massachusetts Institute of Technology, and chairman of the Institute's Committee on Housing, addressed the Institute Tuesday afternoon and Charles Butler of New York presented the report of the Institute Committee on Federal Public Works, of which he is chairman. On Tuesday morning city and rural planning were discussed.

Election of officers resulted as follows: President, Edwin Bergstrom, Los Angeles; vice-president, Dr. W. R. McCornack, Cleveland; secretary, Chas. T. Ingham, Pittsburgh.

Gordon B. Kaufmann of Los Angeles was elected regional director for the Sierra Nevada District.

A forum of architectural education, with C. C. Zantzinger of Philadelphia, chairman of the Institute's Education Committee, presiding, was held Tuesday evening. "Contemporary Architecture Compared to the Architecture of the Past" was the discussion theme Wednesday morning.

N. Max Dunning, architect to the Commissioner of PWA and chairman of the Institute's Structural Service Committee, presided at the joint luncheon Wednesday when talks were given by A. B. Tibbets of the National Lead Company, New York, president of the Producers' Council; Stuart M. Croker, vice chairman of the International General Electric Company, New York; Mr. Maginnis, and Mr. Bergstrom.

John R. Fugard of Chicago presented the report of the Committee on State Organization, of which he is chairman, and Alfred Shaw of Chicago, the report of the Committee on Membership.

The final sessions on Thursday, with Mr. Maginnis in the chair, were devoted to the report of the Committee on Architectural Competitions by Eric Gugler of New York, completion of action on the directors' report, passage of resolutions, announcement of elections and honors, and installation of new officers and directors.

Saturday a tour of housing projects in the vicinity of Washington was made, with an inspection of methods employed in testing building materials at the National Bureau of Standards. Pierre du Pont of Wilmington, Del., acted as host to the architects Saturday afternoon at his home, "Longwood Gardens."

The election of two honorary members, two

honorary corresponding members, and seventeen fellows to the American Institute of Architects was announced.

Nathan Straus, United States Housing Administrator, and Everett Uberto Crosby of New York, originator of the "Crosby Plan" for preserving and restoring Nantucket, Mass., became honorary members. Henry Martineau Fletcher of London, honorary secretary of the Royal Institute of British architects, and Louis Madeline of Paris, distinguished architect and educator, were chosen honorary corresponding members.

Mr. Straus, cited as "philanthropist, statesman, author, and business executive," has been Administrator of the U. S. Housing Authority since November 1, 1937. Mr. Crosby, retired president of Brown, Crosby and Company, insurance brokers, was honored "for the valuable contribution which he has made and is making toward the preservation of the architectural and historic traditions of America."

The Institute's announcement of the election of new fellows said; "The profession of architecture has been well served by these men. Their contributions to design, research, literature, education and public service fulfill the exacting criterion of a vital architecture." Three of the 17 members raised to fellows are from California. They are:

William Templeton Johnson of San Diego, for his unselfish contributions of time and effort toward the advancement of architecture and city planning.

Sumner Spaulding of Beverly Hills, for the very high standard of his executed work and for the interest he has shown in community affairs and problems related to design.

Carleton M. Winslow of Los Angeles, for years of unyielding endeavor in the interest of the profession and for his conscientious efforts in the field of education and his notable achievements in the field of ecclesiastical design.

VETERANS MEMORIAL AND COUNTY OFFICE BUILDING, CARPINTERIA
Winsor Soule and John Frederic Murphy, Architects

HOUSE FOR STANLEY KING, BERKELEY, CALIFORNIA

FREDERICK L. CONFER, ARCHITECT

FRONT ENTRANCE

HOUSE FOR STANLEY KING, BERKELEY, CALIFORNIA

FREDERICK L. CONFER, ARCHITECT

PATIO

FREDERICK L. CONFER. ARCHITECT

CONSTRUCTION OUTLINE

House for Stanley King, Berkeley, California

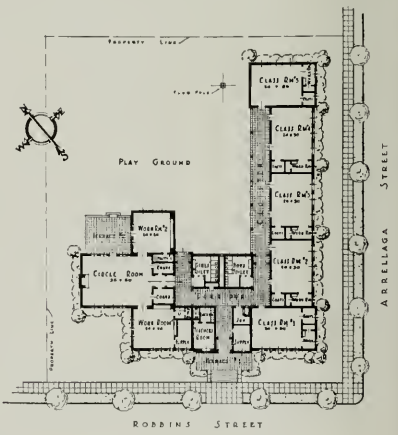
FOUNDATIONS—Concrete
SUPERSTRUCTURE—Frame and stucco; brick veneer
CHIMNEYS—Brick
ROOF—Cedar shingle
INTERIOR FINISH—Texture plaster, wall paper, canvas
FLOORS—Oak
KITCHEN—Colored tile sink, linoleum floor
BATH—Tile floor
WINDOWS—16 oz. glass; Venetian blinds
SASH—Steel casement
HEATING—Gas hot air; air conditioned
PLUMBING—Standard fixtures, Mueller copper pipe
ELECTRICAL WORK—Knob and tube
LIGHTING FIXTURES—Indirect
REFRIGERATION—General Electric
MISCELLANEOUS—Wrought iron balcony rail; parapet cornice; imitation leather front door
TERRACES—Paving brick

STAIR HALL

FRONT

HARDING KINDERGARTEN PRIMARY BUILDING,
SANTA BARBARA, CALIFORNIA

Winsor Soule and John Frederic Murphy,
Architects



FLOOR · PLAN

·KINDERGARTEN·PRIMARY·BUILDING·
FOR ·THE·
·HARDING · SCHOOL·
·SANTA·BARBARA·CALIFORNIA

ENGINEER NEEDED IN SOLVING INTERNATIONAL PROBLEMS

By BENJAMIN F. FAIRLESS*
President U. S. Steel Corporation

IT IS a privilege and a pleasure to meet with the Association of Iron and Steel Engineers here in Pittsburgh this evening. From the personal standpoint I am delighted to find such a pleasant occasion upon which to greet so many friends and acquaintances. A spirit of cordiality is apparent on all sides. Matching it in depth and quality is the evident interest of your members and guests in those numerous serious problems which go to make up their daily tasks. More important still is the cooperative attitude, expressed in your deliberations and proceedings, dedicated to the improvement of engineering services to industry.

Your group comprehends, within its membership, a significant portion of the total talent required for the successful conduct of the iron and steel business. The engineer, or the man with engineering training, has attained a position of indispensability in practically all lines of commercial enterprise, and we know of none in which his role is of more consequence than in the production of steel.

This industry, which engages our mutual interest, is a thing of momentous value to all of the people, for it provides so many of the important requirements of mankind. There is no need to enumerate them here. Rather I wish to emphasize the thought that our first concern is to see that an efficient and progressive steel industry stands ready to meet its obligations, insofar as the efforts of an efficient, progressive personnel can bring about the desired result.

The signs of the times indicate that for an unknown period, you, as engineers of the iron and steel industry, will be called upon to deal with many a difficult problem arising from the present critical situation. By critical situation I mean a pronounced upward surge in the production of steel at a time when powerful factors are making for an extremely unsettled state of affairs in the world abroad. Your professional training and adopted methods insure a reasoned and dispassionate approach to all such matters. The way of the engineer, or the scientist, or the technologist, is like that. He objectively analyzes each case at hand, studies cause and effect, seeks the truth, and applies constructive measures accordingly. It is timely and appropriate that we should discuss here tonight the merits of employing such methods in the solution of other categories or problems. The reasoned and dispassionate approach of the engineer may be exceedingly useful in quarters in which it has been all too much neglected.

During the year 1939 the people of America have heard much about "The World of Tomorrow," the theme of the great World's Fair in New York City. It is a theme which attracts the interest of all of us, for naturally we expect to live and play some part in that world. Moreover, we would be glad to learn, in advance, as much as possible about the conditions which might surround us and our children, perhaps our grandchildren, in the years to come.

No one, of course, knows precisely what tomorrow will bring forth, so the major portion of our interest hangs upon the bold conceptions, guesses, and imaginings set forth by those who have represented their predictions in visible form. It is hardly likely that in the midst of all the conjecturing and planning which evolved the projected World of Tomorrow, provision was made for any such ghastly situation as now confronts the peoples of the earth. The exhibits of our own country and of the sixty foreign nations participating in the Fair, unanimously accent the arts and products of peace as those which are to shape our future. On that basis a beautiful picture has been created, a worthy thought advanced, and a widely-held hope expressed.

Something, however, has gone amiss. Our World of Today, staggering in its pathway, gives little promise of an early fulfillment of the

*An address delivered at the Annual Convention Banquet of the Association of Iron and Steel Engineers in Pittsburgh, Pennsylvania, September 28.

dreams and hopes of its people. Attention and effort are feverishly devoted to unwelcome pursuits. The World of Tomorrow is confounded.

Only twenty years ago many believed that the world finally had been made safe for democracy,—for civilized man, for all human beings, and that one of the greatest lessons of all time had been learned. Through the ordeal of war, men, women, and children had undergone a full measure of mental and physical suffering, sufficient, the survivors thought, to establish their right to an enduring peace. Prolonged political and economic upheavals, following in the wake of four years of destruction, and reflecting its devastating effects, seemed to lay additional convincing emphasis upon the errors of the courses heretofore pursued. It is little wonder then, that given some measure of recovery, men should plan for a better tomorrow, and conceive and build great exhibits to symbolize their will to work constructively for the future.

The present distressing condition of world affairs is evidence enough that the roadway leading into the future is still beset with some of the same old difficulties that have plagued mankind since the earliest days. All of the knowledge and experience acquired by the human race in centuries of patient endeavor had not been sufficient to forestall the use of destructive violences as a means of attaining certain aims and ambitions, or of shaping the destinies of The World of Tomorrow.

Unfortunately, war is still one of the ready instruments employed in dealing with social and political relations. In periods of sanity it has been denounced and renounced repeatedly by individuals and nations, nevertheless it persists. Perhaps the requisite amount of wisdom has yet to be distilled from the attained knowledge and experience of mankind to dictate or compel a more temperate and rational course in the solution of international problems. Wisdom is the word for emphasis. Practical wisdom is undoubtedly the greatest need on all sides, for certainly after these thousands of years, there is no dearth of knowledge and experience. Men know the better ways of dealing with each other, but lack the sagacious insight to adopt and follow them consistently.

History tells us that during the Middle Ages more than sixty per cent of the time was spent in fighting. The trend happily has been downward, for during the most recent century the percentage has fallen to approximately twenty-five. But what has been gained in the lesser amount of time devoted to conflict has been offset by the multiplied intensity of war and its attendant suffering. The great conflict of twenty-five years ago destroyed more than ten million lives, whereas prior to 1914 all of the wars since the French Revolution killed less than half that number. With regard to the increasingly effective engines of war available for use today, someone has said, in warning, "if mankind does not end war, war will end mankind." That, of course, is an extreme view, but it comes too near to possible truth to be reassuring.

No one has been able to compute accurately the economic cost of the World War, for its expenses are still being incurred. Expressed in terms of a familiar currency, the estimated three hundred and forty billions of dollars is probably conservative, taking little account of stand-by charges and contingent liabilities. In the light of subsequent events, and in the face of the present world situation, the important question is, what did the nations purchase at so great a price? Certainly not their necessary supply of wisdom. Moreover if the lessons of 1914 to 1919 teach anything, they teach the futility of attempting to arrive at world-wide gain, contentment, and economic progress through world-wide conflict. Many of you who are here today learned these lessons not from books; to you they were a harrowing personal experience. And "Flanders Field" and "Journey's End" are still remembered in America. It remains to be seen how much of real wisdom has accrued to the people of these United States within the past twenty-five years.

Were it possible to quarantine war, as has been suggested, or to isolate oneself completely from a troubled world, there might be reason for less concern over international strife

abroad. A hundred years ago the chances of aloofness were better than they are today. Many factors now render such perfect isolation difficult. The ready availability of means for rapid communication and transport, the established custom of international trade, the reliance upon foreign sources for essential materials, all operate against the possibility of effective detachment from external matters. Moreover, an aloofness, based upon indifference, is hardly compatible with the natural sympathy for fellow men in the throes of mortal combat.

We know at once that a substantial derangement of the political, economic, or social order anywhere on the earth has an immediate effect upon our own affairs. Therefore, we are rightly concerned with what is now transpiring, even though that concern relates first and foremost to the maintenance of a state of neutrality. We are solicitous about what may happen, and on guard to avoid involuntary entanglement in hostilities.

The spectacle which lies before us in foreign lands is indeed a distressing one. It shows that in this twentieth century, although men have learned to deal in an enlightened manner with nature, they have failed, as yet, to deal wisely enough with human nature. You, and I, and all of us, as professional and business men, are appalled at the possibilities inherent in the present struggle. Our minds normally do not encompass the thought of spreading death and desolation for the purpose of accomplishing our ends. The rational and dispassionate method adopted by the engineer in approaching his problems stands in sharp contrast with the one repeatedly used in the attempted solution of international disputes. Let us examine the two more closely. On the one hand there is an analysis of cause and effect, a study of the relation of part to part, a search for facts, and a building with due regard for natural laws. On the other there is a foundation of passion, jealously, and fear, a resort to pressure politics, and a widespread destruction of life and property. Which of these methods, do you think, partakes of the essence of wisdom?

It is a sad commentary upon the ways of human nature that the so-called enlightened peoples of the earth have not applied the most constructive methods to all aspects of living. They have certainly employed superior techniques in developing the more material pursuits, and have made significant progress thereby. The teachings of science, engineering, and technology have been used to remake, several times over, the methods of industry. Within the comparatively short period of a hundred years the advancement has been amazing,—so outstanding in fact that we are said to be living in the "industrial age." This application of the scientific method to the production of goods has not only brought about astounding improvements in all lines of industry, but has exerted a profound influence upon the social order by raising the standard of living.

One need not go back a full hundred years to catalog an impressive list of benefits accruing from the course pursued by industry. It has consistently taken into its workshops the great inventions and discoveries, the advances in engineering, and the findings of its research workers, and has made the resultant devices and materials available to the people at large. The telephone, telegraph and radio, the modern steam engine, turbine, electric generator and motor, the typewriter, the internal combustion engine, agricultural machinery in profusion, and the airplane are cited as illustrative. Millions of mechanical aids and implements of production are assisting men and women in the performance of their daily work. Generated power, in abundance, is available practically everywhere. The installed horse power in the United States today, if divided equally among all of the inhabitants, has been estimated to be equivalent to the services of approximately one hundred servants.

In a large measure the long work day of the nineteenth and earlier centuries has gone from industry. Real wages have increased. Much of the drudgery of work has been shifted from human shoulders to machines. The lightening of burdens has reached into millions of households as well as into factories, mines, and fields. Natural resources are more efficiently used and effectively conserved by the application of

scientific methods. Thousands of useful products unknown to our forefathers now make life's walks progressively easier.

You gentlemen of the Association of Iron and Steel Engineers, from your intimate contact with the steel industry, know of the remarkable progress it has made in much less than a century. Enormous forward strides have been taken in the improvement of processes, equipment and products. Year by year, the methods of science and engineering have come more and more into play, without the sacrifice of any real values established by experience. Today the steel industry is equipped to serve, as never before, the needs of the people.

This brief word-picture of progress in industry has been drawn in the interest of supporting what was said a little while ago in deprecation of war. The constructive results of one stand out in comparison with the stultifying effects of the other. Now, we ask, of what use is all this progress and improvement in one sector of life, if it can be readily offset and nullified by the use of unwise methods in another? Why develop the implements and conditions for better living if men cannot learn to live together?

As a strong suggestion, we add the question which is probably now in your minds,—might it not be possible to apply more of the scientfic or engineering approach to the solution of political and international problems, in the hopes of securing more of its characteristic results? It is unreasonable to suppose that only with respect to matters lying outside the field of international relations can men ascertain facts, apply exact knowledge, reason from cause to effect, correct errors, and act constructively. A system which works, one which has proved its effectiveness and worth over a long period of years, certainly deserves serious consideration in every quarter. Let us all make an effort to have more of its principles injected into the handling of political matters, national and international. Already the day is late, but men will be living on the earth for many years to come. We are interested in contributing something of lasting value to The World of Tomorrow. The various nations will not be more isloated then than now. Therefore we must have a will to mend injustice promptly and rationally, and learn to live together. The protection of our inalienable rights,—life, liberty, and the pursuit of happiness depends upon our ability to gather and apply wisdom.

The engineers, along with others who use or approve the objective and dispassionate procedure, would do well to make their voices heard as citizens, calling upon political leadership everywhere to partake of their methods in the solution of international problems.

THREE SUGGESTED DESIGNS FOR CONCRETE SWIMMING POOLS

MUNICIPAL, country club and private swimming pools are becoming increasingly popular. Three interesting designs are shown here by courtesy of the Portland Cement Association. Capacities and facilities of swimming pools and bathhouses naturally depend upon operation, local customs and demands. However, there are a few general rules which may serve as guides for design under average conditions.

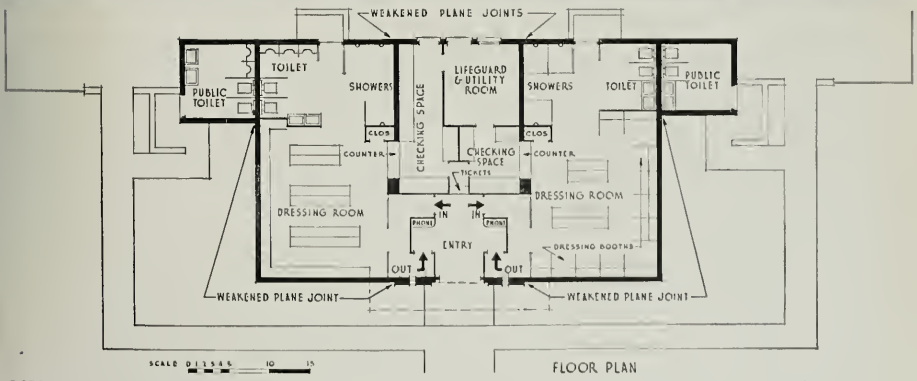
The bathhouses illustrated are designed for pools 30x75, 40x100 and 60x150. The maximum number of persons assumed within the pool enclosure (pool and walks) at any one time is 190, 340 and 750 respectively. The proportion of men to women, while varying considerably, has been assumed as two to one.

Dressing areas will not differ greatly for men and women since the private dressing rooms, which must be provided for part of the women, require more area per bather than the dormitory system used for the men.

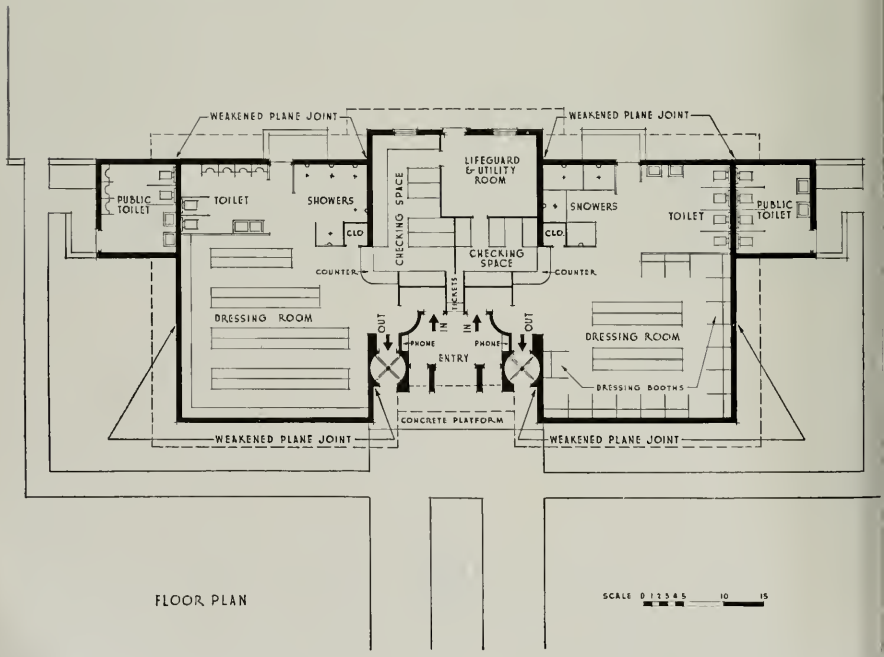
Facilities should be arranged to avoid confusion between incoming and outgoing bathers. The route from the dressing room to the pool should be past the showers and toilets. The latter should be accessible from the pool without passing through the dressing area, and in larger bathhouses separate "dry" toilets for patrons in street clothes are desirable. Separate facilities must be provided for spectators.

Adequate ventilation is important. Louvered openings backed with mesh are satisfactory. Frequently the check room has extra height to improve ventilation in that area. The open-court type of bathhouse in which the roof is omitted over the major portion of the dressing area has been quite satisfactory in the larger developments.

The floor should be pitched about 1/4 in. per ft. to outlets so it can be washed with a hose and will dry quickly.



FLOOR PLAN


WEAKENED PLANE JOINT
WEAKENED PLANE JOINT
PUBLIC TOILET
TOILET
SHOWERS
CLO.
CHECKING SPACE
LIFEGUARD & UTILITY ROOM
CLO.
SHOWERS
TOILET
PUBLIC TOILET
COUNTER
CHECKING SPACE
COUNTER
TICKETS
DRESSING ROOM
OUT
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PHONE
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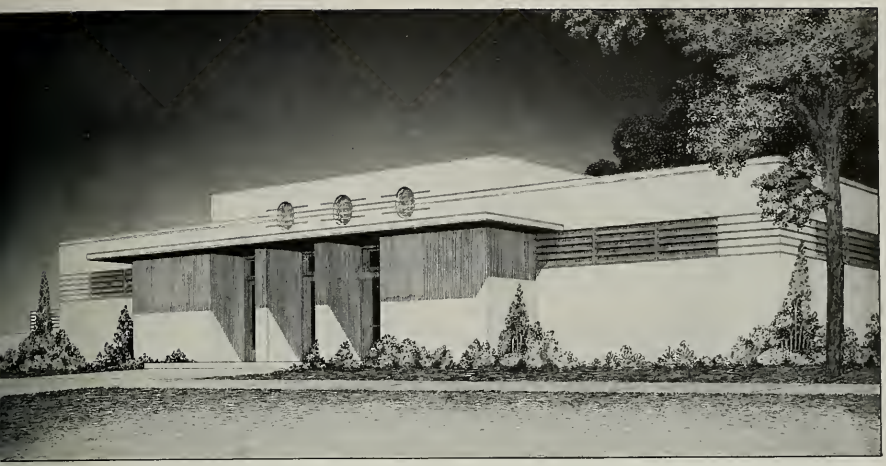
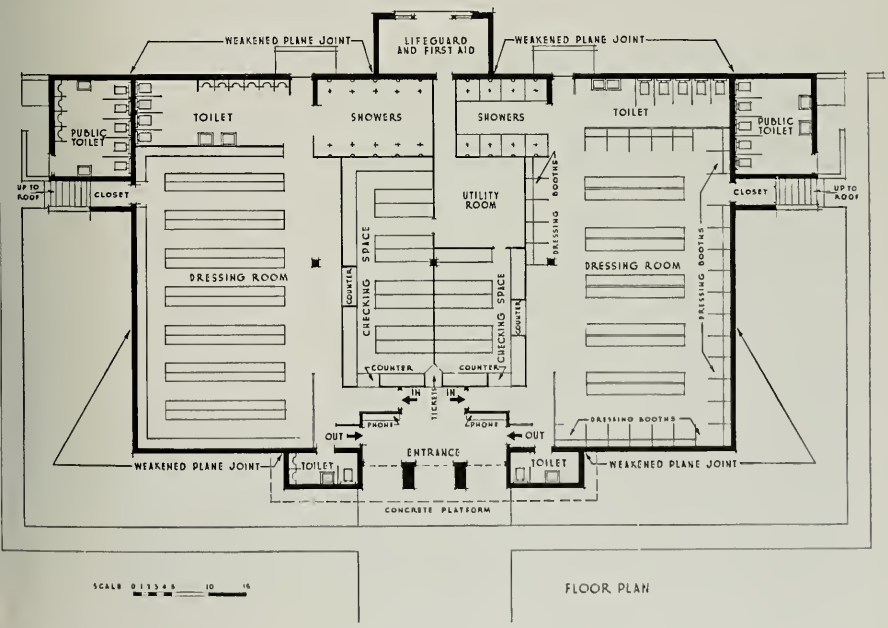
FLOOR PLAN




WEAKENED PLANE JOINT
LIFEGUARD AND FIRST AID
WEAKENED PLANE JOINT
PUBLIC TOILET
TOILET
SHOWERS
SHOWERS
TOILET
PUBLIC TOILET
UP TO ROOF
CLOSET
UTILITY ROOM
DRESSING BOOTHS
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WEAKENED PLANE JOINT
TOILET
TOILET
WEAKENED PLANE JOINT
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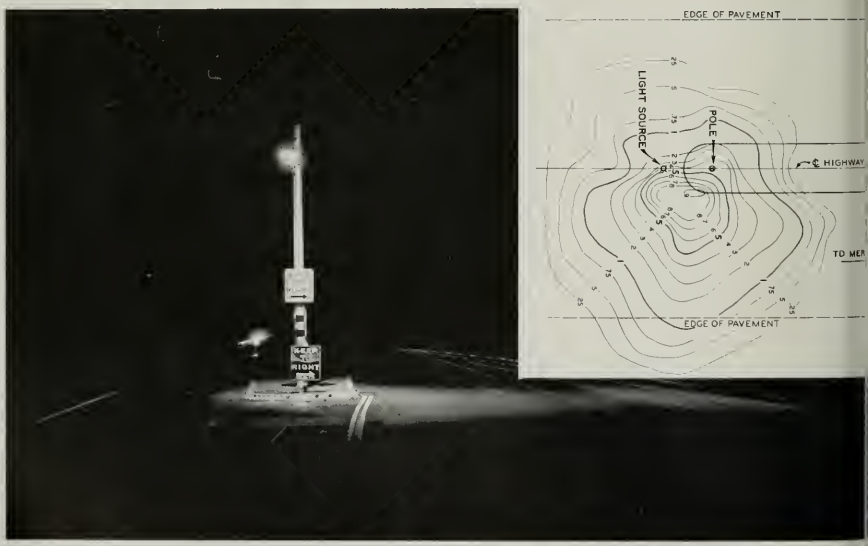
SCALE 0 1 2 3 4 5 10 15

FLOOR PLAN

Daylight view of new divisional island lighting equipment on 30-foot pole with 12-foot arm 18 feet above ground.



Night view shows bright lighting of island point and signs. Inset graph of isolux lines shows illumination of approach lanes.
Courtesy California Highways and Public Works

CALIFORNIA FIRST TO USE DISTINCTIVE HIGHWAY LIGHTING

WITH the development of vapor lights conveying different reactions to the traffic on public ways, the traffic engineer and public officials have given much thought to an intelligent use of the various colored sources in an attempt to promote their uniform usage.

The yellow glow produced by sodium vapor lamps coincided so closely with the color used for many years on the public highways and over a much longer period of years in railroad operation, as a cautionary color, that it was immediately used by traffic engineers to give the same information on vehicular highways.

However, as utilized in actual practice, such illumination is not confined to locations requiring merely cautionary lights, though the sodium vapor light does provide this indication.

California, with the advent of the sodium vapor light, did use it for cautionary lighting at potentially hazardous accident reoccurring intersections of public ways—channelizations, intersections and at underpasses. A new problem is presented in providing a distinctive color for the entrance to divided highways.

The potential hazard at intersections is of a different character than that at the beginning of a divided highway, because in the latter case it is necessary to deffect the traffic at these points of separation into definite lanes of travel and to convey the necessary information that through the section of highway ahead traffic will be separated by a divisional area.

Assuming that these areas are for the most part rural in character, it was considered advantageous to confine this indication to the illumination of the curb at the point of the island and to the area the entering traffic might use. Traffic exiting from such divisional sections should be readily and adequately advised without being forced to pass through an illuminated area which creates a period of darkness at a point where the potential hazard of head-on collision increases because of the lack of a divisional island.

The installation consists of an inclosed type distorted asymmetric distributing luminaire with adjustable socket mounting—a shielding deflector forming a right angle and fitting the shape of the spun-on globe, to keep the light out of the eyes of the approaching traffic and direct it transversely to the areas for which the illumination was desired. The reflector portion of the luminaire is stepped or fluted to direct the rays away from the opaque inner quartz stem of the lamp to obtain lower lamp operating temperatures and increased life. This advantage may be reduced to some extent by the new deflectors introduced within the luminaire, but test results on this point are not yet available.

The lamp is a 250-watt mercury vapor, 10,000 lumens, type H5A, which at present has the same service life as incandescent Mazda lamps, but which, no doubt, will be improved as was the case with the sodium vapor, to approximate that of sodium lamp life. The unit was mounted 18 feet above the pavement on a 12-foot trolley mast arm fixed to a pole set eight feet back from the point of the island. The luminaire hangs four feet out from the point of the divisional island on the center line extended.

The accompanying graph of the isolux lines for horizontal foot candles shows how the illumination from this specially designed deflector meets the requirements. The far lane of the exiting traffic receives practically no illumination, and the inner lane receives but three-quarters of a foot candle. A distant indication is received by this traffic with no flash at the point of exit. The point of the island on the exit side receives two-foot candles and this illumination on the curb at the point increases to four-foot candles at the center, with nine-foot candles on the curb and immediate adjacent pavement at the entrance. The area receiving eight-foot candles is correctly located to provide the indication where needed most.

The direction and spread of light as shown by this graph of final illumination is obtained with no flash or source of light being visible to the entering or exiting traffic. A sign, 30 by 36

inches with black copy on a white background, reading KEEP TO RIGHT, is placed on the light standard at a height of approximately ten feet from the bottom of the sign above the pavement. This height was determined by readings in order to place the sign in the maximum beam from the luminaire. The legibility of this sign produced by the blue-white mercury vapor light was increased nearly 100 per cent over daylight visibility. The sign, while not legible, was visible to approaching drivers from a considerably greater distance.

In order to provide extra safety a flashing yellow beacon was imbedded in the curb at the point of the island with a three-inch reflector on either side. A low mounted reflectorized KEEP TO RIGHT sign also gives an additional factor of safety.

California is the first state to make use of this distinctive lighting of approach island points and channelization area.

Since the installations are comparatively recent there has been no opportunity to evaluate the effect on accident reduction. However, the favorable reaction from several traffic engineers as well as the motoring public indicates that this new idea of a definite and distinctive area illumination will be a contribution to safety.

FEDERAL AND STATE BUDGETS IMPROVE BUILDING OUTLOOK

Building construction in Northern California, the central and southern sections of the State, as far as Bakersfield, and the State of Nevada, territory covered by Architects' Reports, a daily news service published by this magazine, showed no let-up in volume for the month of September. Under the "Plans in Progress" classification, totals for the month leaped from $5,198,000 in August to $29,501,288 in September, the tremendous increase being accounted for by the Aeronautic Research Laboratory at Sunnyvale for which the Federal Government has appropriated $10,000,000, a $12,298,000 approved State building budget and Federal Housing projects in Oakland totaling $2,500,000.

Projects "Out for Bids" ran about the same in September as in August, while in the "Contracts Awarded" column, the totals for September were considerably under the totals for August. The grand total under all classifications for the month was $43,182,024 as compared with $32,560,603 in August. Classifications of the three major divisions with the totals of the more important items in each, follows:

Plans in Progress

Apartments	$ 2,500,000	
Residences	79,000	
City, County & State	12,570,288	
Aeronautic Research Laboratory (Sunnyvale)	10,000,000	
Schools & Colleges	2,200,000	
Theatres	210,000	
Churches & Hospitals	362,000	
Stores	105,000	
Industrial & Garages	1,475,000	$29,501,288

Projects Out for Bids but not Awarded

Apartments	$ 30,000	
Residences	136,000	
City, County & State	1,260,873	
Government	5,773,593	
Schools & Colleges	450,900	
Churches & Chapels	85,000	
Office Bldgs.	100,000	
Stores	160,000	
Industrial	150,000	$ 8,146,366

Contracts Awarded

Apartments	$ 186,500	
Residences	430,510	
City, County & State	144,087	
Government	3,445,562	
Schools & Colleges	361,970	
Theatres & Miscl.	122,787	
Office Bldgs.	127,418	
Stores	267,612	
Industrial	447,924	$ 5,534,370
		$43,182,024

ARCHITECT'S DAY AT GOLDEN GATE EXPOSITION

By FRED W. JONES

OCTOBER 11th was Architect's Day at the Golden Gate International Exposition—a day that will be remembered by the profession as a highlight in 35 years of activity of the Northern California Chapter. Fully 300 architects, engineers, artists and others allied with the professions of building and industry were present, in addition to a number of distinguished out-of-state guests. The faculty of the School of Architecture, University of California, was well represented, and public men of prominence were among the speakers. Mayor Rossi enlivened the cocktail hour with his presence, arriving late, but not too late to make a few remarks, gist of which was praise and more praise for the architects whose achievements had made possible the Fair.

With the versatile and inimitable Abe Appleton in the role of master of ceremonies, the formal program was launched in the Blue Lounge of the California Building and for a full hour the well filled room echoed with the applause and laughter of a jovial assemblage —its spontaneous tribute to a repertoire of brilliant humor and good natured bantering between speakers.

Jas. H. Mitchell, Chapter president, said it was not necessary to welcome the architects for, after all, it was the architects who were giving the party. But he expressed delight at the large turnout of the profession and extended hearty welcome to the others present, including many ladies who added color and gaiety to the occasion.

Chris Merchant spoke for the Governor and as a member of the California Commission said if there was anything lacking to make the event more pleasurable, the committee had only to ask and it would be given, if such were possible.

Introducing Leland Cutler, the Exposition's president, Mr. Appleton said he had merely a rotogravure acquaintance of the distinguished gentleman, to which phrase Mr. Cutler later referred and said he intended looking up the word rotogravure and if its meaning did not suit him, Appleton would hear more about it.

As a further introduction, Mr. Cutler was singled out as the man who early in the Exposition days earned the reputation of being pretty much of a "Yes" and "No" man. For example, it was mostly "No" to the architects, but invariably "Yes" to the leaders of the swing bands.

Tim Pflueger's Federal building, which has probably brought forth more comment, good, bad and indifferent, than any other structure on the Island, due to its unusual column formation which gives the impression of a steel frame, was the object of a concluding story by Appleton that went something like this:

Newspapers had announced the early closing of the Fair and an aged couple from the Middle West were discussing the painful news as they approached the Federal building.

"Huh," said the old man, "I don't see why they want to close the Fair ahead of time when even now all the buildings ain't completed."

Mr. Cutler gave a fine talk, as he always does, and following him Harris Allen told some good stories, made a few puns, not the least clever of which was the one about how the Exposition management had worried itself almost sick trying to secure good attractions that would swell the attendance, apparently never giving the architects a thought, men who admittedly were in a position to "draw good houses."

Not a little credit for the success of the affair is due Wm. H. Knowles of Hertzka & Knowles, who gave much of his time and initiative as chairman of the Entertainment Committee.

A feature of the ceremonies was Irving Morrow's "Exposition Ode—San Francisco, 1939," which Mr. Appleton read with dramatic feeling:

I

Lo! How the star of evening (or of morning)
Rising (or setting, as the case may be)
Enkindles multitudinous gauds adorning
Proud towers that greet the west (or eastern) sea.
Here eager throngs of high and low degree
That surge against distended entrance wickets,
Relinquishing coupons from season tickets,
Advance triumphant toward the truth that meketh free.

II

Ye pilgrims to these shores of Treasure Island,
Seek not the encircling sweep of azure bey
Receding unto bluer cape and highland!
Beyond those haughty portals' bright array
Such idle lure is sternly put away,
Devoted to the use of transportation,
Whilst unremitting urges to creation
Fashion inland lagoons where only island lay.

III

In these confines where Man is Nature's master,
Where scholarship and fancy interwine,
Resplendant forms of unenduring plaster
Upsurge to court whatever light may shine,
The Architect, in deference condign,
With learned discourse tuned to gentle railing
Exposes each stylistic lapse and failing
And asks what plate accorded this or that design.

IV

Temple of Beauty, thy inviolate cella,
Wherefrom pale Culture's incense doth expand,
Still boasts the constant ministry of Stella—
Age cannot wither her, nor custom stand
Her infinite monotony. Demand
No less obeisance unto new attendants—
Folies Bergeres' illustrious ascendance,
And priestesses who tend the cult of Sally Rand.

V

From distant cevos of Aeolus embarking,
Cohorts of Boreas struggle to repel
Tho mists usurping gelid fields of parking
Obscuring Court and Avenue as well.
Behold the tide of animation swell
To surges of bewildered Culture-seekers,
Fleeing in vain ubiquitous loud-speakers
Shoulder inclined to wind, and muttering 'What the Hell!

SUNSHINE HOUSE, TREASURE ISLAND

Sixty-five hundred visitors who on Labor Day swarmed into the all-gas Sunshine House on Treasure Island, vindicated this inspiration of the San Francisco building industry. The story of Sunshine House is one of devoted cooperation in planning and coordinating the uses of labor and materials which have been voluntarily given to demonstrate to a home eager public the best in a moderate size home at low cost. In March, 1939, leaders of the Construction Industries Section of the San Francisco Chamber of Commerce suggested and decided upon erection of a five-room model all-gas house on the Homes and Gardens Section of Treasure Island.

The State Association of California Architects gave its support, appointing Vincent Raney and Loy Chamberlain to draw the plans and prepare specifications. In a short time, blue prints were completed and approved by the local F.H.A. office. Butler Sturtevant, A.S.L.A., agreed to act as landscape architect and laid out the grounds in close harmony with the house. They provide utmost privacy and facilities for rest and play with gardens, a badminton court, suncourt, ping pong table and play yard for children among its variety of attractions.

Building material and equipment manufacturers and distributors, singly and in voluntarily organized groups, donated all materials as needed. Other building trades were equally generous—carpenters, plasterers, helpers, laborers, plumbers, electricians, glass workers, brick layers and tile setters—all provided their best services to sound and speedy building.

The architect designed Sunshine House for a composite Californian of moderate circumstances, with one or two children. The bedroom wing is entirely separate, designed for quiet and rest. The living and dining rooms stretch out into the open air through wide doorways, where there is a large terrace for play and hospitality. The living room is spacious and comfortable in its shell of wood and glass. Warm redwood paneling, broad shelves, well stacked with books, and a beautiful hearth make it a friendly room.

The kitchen, with its gas refrigerator and range, is a marvel of streamlined planning. From cooler and refrigerator, by way of sink and range, food preparation moves swiftly and smoothly. All equipment has every avaliable control for easy operation. The forced air gas furnace and automatic water heater are installed in an out-of-the-way closet where they occupy little space.

When the Exposition closes, Sunshine House will be completely set up in San Francisco on an 80′ x 100′ lot. The winner will be selected at a grand ball in the Civic Auditorium on December 9.

HIGH SCHOOL BUILDING

The Rio Vista Joint Union High School District has awarded a contract to add three science rooms and as many more classrooms to be added to the present school building for $60,000. Charles F. Dean, of Sacramento, is the architect.

HOME OWNERSHIP CHEAPER THAN RENT

Owning a home now is cheaper than paying rent in a majority of Northern California communities, with monthly purchase payments materially reduced since inception of the FHA plan, according to statistics compiled by the district office of the Federal Housing Administration.

Due to recent reductions in FHA financing costs, it was shown that payments averaging $28.80 a month are paying off insured mortgages on new homes built in this district during the first seven months of this year. This is a drop of 30 per cent from $37.44, average monthly payments on new home mortgages insured in this area in 1936, and a substantial reduction from the $35.33 average in 1937, and $30.06 a month average in 1938.

These payments, it was declared, repay the amount borrowed, which usually covers construction costs, interest on the loan, and mortgage insurance.

Costs and valuations vary through the district, according to the FHA report.

In San Francisco metropolitan area, including the Peninsula and counties bordering on the bay, where 59 per cent of all homes built last year were financed by FHA insured mortgages, the average mortgage on new homes amounted to $4,830. More than half, or 55.2 per cent, were written for more than 20 years. The average appraised value was $5,814, of which $908, or 15.6 per cent, represented land value.

In San Jose metropolitan area, including the Monterey Peninsula and Salinas valley, 70.3 per cent of all new homes last year were built under FHA inspection and financing. The average new home mortgage was $3,954 and 56 per cent were for more than 20 years. The average appraised value was $4,785, of which $630, or 13.2 per cent, represented land value.

In Superior California, the Sacramento and San Joaquin valleys, where 66.2 per cent of new homes were built and financed under the FHA plan, the average new home mortgage was $4,164, and 55.8 per cent of them were written for more than 20 years. The average appraised value was $4,952, of which $652 or 13.2 per cent represented land value.

That families in the lower income groups are taking advantage of the safety features of long-term insured mortgage financing under the FHA plan is attested by the fact that 45 per cent of the owners of newly-built homes in Northern California last year had annual incomes between $2,000 and $3,000, while 24 per cent earned less than $2,000 a year. In other brackets, 25 per cent had incomes between $3,000 and $5,000, and only 6 per cent had incomes of $5,000 or more a year.

The houses built averaged five rooms, and slightly more than 25 per cent had two-car garages.

FAIRFIELD RESIDENCE

A seven-room residence will be built at Fairfield, Solano County, for W. C. Robbins, Jr., from plans by Fred L. Confer, Claremont Hotel, Berkeley.

With the Architects

NEW A.I.A. PRESIDENT

Edwin Bergstrom, architect, of Los Angeles, is the new president of the American Institute of Architects, elected at the recent convention in Washington to succeed Charles D. Maginnis of Boston. The nomination was made by petitions through 42 Chapters of the Institute and the election was unanimous.

Mr. Bergstrom had previously served as a director and treasurer of the Institute. Graduated from Massachusetts Institute of Technology and Yale University, he settled in Los Angeles in 1902 and formed a partnership for the practice of architecture with the late John Parkinson, since the termination of which he has practiced independently.

CHAPEL FOR CREMATORIUM

The Mountain View Cemetery Association will add another unit to its extensive burial and crematory plant at the end of Piedmont Avenue, Oakland, by constructing a chapel for the crematorium, from plans by W. P. Day and Harry Michelsen, 405 Montgomery Street, San Francisco. Construction will be of concrete and brick.

The same office has completed drawings for a gymnasium building at the Outer Mission Junior High School in San Francisco at an estimated cost of $165,000.

SACRAMENTO TELEPHONE BUILDING

The Pacific Telephone & Telegraph Company has had plans prepared by its engineering department in San Francisco for a one-story Exchange Building, 88x96 feet at Stockton Boulevard and Miller Way, Sacramento. The Judson Pacific Company has the structural steel contract and Lindgren & Swinerton submitted low bid for the general work.

BOTTLING PLANT

The Coco Cola Bottling Company will spend close to a quarter of a million dollars on a new bottling plant and office building on the block bounded by 13th, 14th, Kirkham and Cypress Streets, Oakland. The building will be one and two stories, of structural steel and reinforced concrete. The plans were prepared by Jesse M. Shelton of Atlanta, Georgia.

SAN RAFAEL GYMNASIUM

From plans by Henry A. Minton, 525 Market Street, San Francisco, a one-story reinforced concrete gymnasium will be buildt at St. Vincent's School, San Rafael, at an estimated cost of $35,000.

WOODSIDE RESIDENCE

Plans have been completed By Gardner A. Dailey, of San Francisco, for a ten-room house in Woodside for Mr. Price.

THE WAR AND BUSINESS

Architects and engineers are asking among themselves what is likely to happen to the building industry if the European war continues for any length of time. Thus far there have been no alarming symptoms but many experts seem to think if the conflict continues indefinitely it will lesson building operations appreciably, especially homes. Such being the case the already admitted house shortage would become even more acute, creating a natural rise in present home values and a demand for property that has failed to bring buyers for several years. It may mean a profitable turnover of many homes whose owners have been courageously and hopefully "holding on" for a better market.

The opinion shared by many is that an extended war is bound to draw on this country for materials and supplies of all kinds. As a result prices will rise and increased activity in every line will follow. But whether the increased prices will be sufficient to deter investors from building remains to be seen. Industrial plants whose business is helped may have to build to take care of increased production and both architects and engineers would reap some benefit here.

WHO'LL BE THE ARCHITECT?

(From a local newspaper)

Capt. E. L. Norberg, Burlingame architect, and County Executive Frederick Peterson called at the County Jail today for preliminary blue-prints and estimates on the $16,000 third-story cell block provided for in the 1939-40 budget.

On Tuesday the Board of Supervisors voted to retain Architect W. H. Toepke for the work. When informed of the action, Peterson announced the charter gave him authority over county buildings; that he would refuse to honor claims for Toepke's fees, and in any event he would not retain Toepke.

He declined to state whether or not he had retained Captain Norberg.

PERSONAL

Henry H. Gutterson and **Bernard Maybeck,** architects, have been named members of the Berkeley City Planning Commission. This is the second time Mr. Maybeck has been so honored.

Irwin M. Johnson, architect, has moved into his new studio offices at 449 Moss Avenue, Oakland. This is a much more central location than Mr. Johnson's former office in East Oakland.

E. N. Curtis of Binder & Curtis, architects, has been named a director of the San Jose Water Works to succeed R. Van Horn, resigned.

SEPTEMBER MEETING — WASHINGTON CHAPTER

The regular September meeting of Washington State Chapter was held at the Benjamin Franklin Hotel, Seattle, on the evening of September 7th. This was a "Pre-Convention" meeting and for the transaction of miscellaneous business. It was largely attended by members and guests, including a former member, Dan Huntington, and a good representation from Tacoma. Following a satisfactory dinner provided by the hotel, President Naramore called the meeting to order.

The subject of the joint meeting with the Oregon Chapter was not presented for discussion. It having been decided to have the meeting at Grand Coulee it was voted that the date be the weekend of November 4th and a committee of Seattle members was to be appointed to arrange details with the Spokane group and the Oregon Chapter.

The participation of private architects in government work occasioned considerable discussion initiated by a statement from Mr. Priteca, a member of the Institute Committee on Federal Public Works, that it was the desire of the committee to receive new and progressive ideas that would help in securing further participation by local architects. Competitions, adequately conducted in two classes, met with favor in the discussion and the suggestion was made that the conduct of the work be de-centralized.

The 1939 Golf Tournament was held Wednesday, September 20th, at the Maplewood golf course. Clifton J. Brady proved himself the champion golfer, winning the Clay Products Trophy with a remarkable gross score of 79, rating him also the winner of a gross score prize for coming closest to the pin at the 6th hole. Floyd Naramore and John Maloney tied for runner-up, dividing the prize of a vase donated by the Gladding, McBean Company and a number of golf balls. Steve Richardson was the fourth best and Bob McClelland and Monte Shorett tied for fifth and sixth. Other prizes went to Chapter members Jim Savery, Ted Carroll and Charles Alden. A. M. Young was awarded a golf ball for making the high gross score but donated it to President Naramore as he would have no occasion to use it until the Chapter Tournament next year. Guests winning prizes were Pete Chiarelli, Lincoln Bouillon, Jack Agutter, Harry Bromen and Ray Bosel.

At the October 5th meeting in the Benjamin Franklin Hotel, Dan Huntington entertained with colored motion pictures, illustrating scenes and activities encountered by him while in the government service.

$12,000 ATHERTON RESIDENCE

A $12,000 eight-room frame and brick veneer residence has been designed by Leo J. Sharps, architect of Burlingame, for a San Mateo client. The location of the house is Atherton Avenue, San Mateo. Low bid for the work has been submitted by Lengfeld & Olund of San Mateo.

CORNELL COLLEGE OF ARCHITECTURE

Four appointments recently have been made to the staff of the College of Architecture, Cornell University.

Eric Gugler has been named Associate Professor of Architecture in place of F. A. Bosworth, who is on leave of absence for the current academic year. Mr. Gugler graduated from Columbia University.

James O. Mahoney, mural painter, has been appointed Assistant Professor of Fine Arts. He graduated from Southern Methodist University in 1928, and from the Yale University School of Fine Arts in 1932.

A. Henry Detweiler, a graduate in Architecture of the University of Pennsylvania in 1930 has been appointed Instructor in Architecture and will teach Architectural History.

John Udall, graduate of the College of Architecture, Cornell University, 1930, has been appointed Instructor in Architecture to assist in the Department of Structural Design.

FRANK LIDSTONE BAKER, ARCHITECT

A conscientious and able member of the architectural profession and a member of the Washington State Chapter, American Institute of Architects for many years, Frank L. Baker, passed away on September 14th. A native of Ontario, Canada, Mr. Baker came to Seattle in 1908 after several years experience in the offices of leading architects in New York City and designed many buildings in the Pacific Northwest. As a member of the firm of Blackwell and Baker, his architectural work included the Grand Trunk Pacific Dock, public libraries at Olympia, Wenatchee and Burlington and Armory at Bellingham. Later in the firm of Baker, Vogel and Roush he designed many churches, schools, and other buildings in Washington, Idaho, and Oregon. Becoming a member of the American Institute of Architects in 1913 he served for several years as treasurer of the Washington State Chapter.

Frank Baker was an idealist in architecture, continuously devoted to the highest ideals of his profession. Besides deriving enjoyment from the fine arts, he was a lover of nature, fond of music, and deeply interested in the social welfare of the people.

KIRTLAND CUTTER, ARCHITECT

Kirtland Cutter, 79, 1816 E. Ocean Boulevard, Long Beach, died at a hospital in that city September 26, after a brief illness. A native of Cleveland, Ohio, he moved to Spokane, Washington, in 1923, and later moved to Southern California. He designed hotels, business and club buildings in Spokane, Seattle, Lewiston, Idaho, and the Glacier National Park, Montana, and many homes in the Palos Verdes district. He was a member of Southern California Chapter, A.I.A.

MATERIALS FOR WPA PROJECTS PASS BILLION DOLLAR MARK

Private industrial concerns and equipment contractors have received nearly $1,700,000,000, in orders for purchase of construction materials and equipment and rental of equipment for use on WPA projects, according to Howard O. Hunter, Deputy Works Progress Commissioner.

In addition to $1,075,811,148 spent for purchase of materials, equipment and other supplies, WPA operations required the expenditure of $604,973,815 for rental of equipment from private individuals and contracting concerns during the four years ended June 30. Local governments sponsoring WPA projects provided more than two-thirds of the funds for purchases and more than three-fifths of the funds for equipment rental.

The proportion of the cost of material, supplies and equipment borne by local governments has increased sharply since the beginning of the program, Mr. Hunter said, reflecting increased sponsors' cooperation and steady improvement in the quality of WPA projects and work as well as a policy of restricting Federal expenditures so far as possible to project workers' wages.

Sponsors' expenditures for purchases amounted to 69 per cent of the total in the fiscal year ended June 30 as compared to 31 per cent in the fiscal year ended in 1936, the first year of WPA operations, and 51 and 65 per cent respectively in the fiscal years ended in 1937 and 1938.

Nearly every branch of the capital goods industries was stimulated by large orders for products used in public improvements constructed by WPA workers. The largest amount was $378,000,000 for stone, glass and clay products, comprising more than one-third of the total purchases. Included in this total were approximately $100,000,000 for cement, $75,000,000 for sand and gravel, $65,000,000 for crushed stone, $50,000,000 for concrete products and $50,000,000 for brick and tile.

Iron and steel products made up nearly one-fifth of the total purchases, or about $200,000,000; lumber and its products, 10.5 per cent, or more than $100,000,000; bituminous mixtures used principally in paving, eight per cent, or $90,000,000; textiles used principally for sewing rooms, 6.5 per cent, or $70,000,000; and machinery and equipment, four per cent, $45,000,000.

While local sponsors were spending $606,315,850 to the Federal Government's $469,495,298 for these purchases, the sponsors were providing $364,814,849 for equipment rentals to the Federal Government's $260,158,966.

More than half of the $605,000,000 of rental expenditure was for trucks and more than one-third was for paving, roadbuilding and other construction equipment. An additional amount was spent for the hire of teams and wagons.

A survey indicating the quantity and variety of equipment rented from private individuals and firms showed that during the two weeks ended November 19, 1938, WPA projects used more than 75,000 individual pieces of rented equipment. These included more than 55,000 trucks, more than 5,000 power shovels, graders, draglines and similar equipment for excavation and grading, and more than 5,000 cranes, mixers, rollers and similar equipment for handling and placing materials. Other pieces of equipment included trucks and cars for workers' transportation and quarrying and crushing machinery.

The following table gives some of the larger items of WPA project purchases:

(Partly Estimated—Subject to Revision)

Type of Material	Total Amount	Federal Funds	Sponsors' Funds
GRAND TOTAL	$1,075,811,148	$469,495,298	$606,315,850
Stone, Clay, and Glass Products	378,468,960	173,264,598	205,204,362
Brick, Tile and Other Clay Products	49,824,982	21,165,695	28,659,287
Cement	98,585,242	61,917,732	36,667,510
Concrete Products	53,749,039	24,935,401	28,813,638
Crushed Stone	64,793,918	29,519,450	35,274,468
Sand and Gravel	74,390,595	24,606,641	49,783,954
Stone and Glass Products, N.E.C.	37,125,184	11,119,679	26,005,505
Iron and Steel Products	195,749,233	74,904,343	120,844,890
Cast Iron Pipe and Fittings	57,062,241	19,241,578	37,820,663
Heating and Ventilating Equipment	9,789,798	3,242,391	6,547,407
Structural and Reinforcing Steel	48,842,142	22,751,406	26,090,736
Tools, Excluding Machine Tools	18,632,935	8,992,059	9,640,876
Other Iron and Steel Products, N.E.C.	61,422,117	20,676,909	40,745,208
Lumber and Its Products, Excl. Furniture	113,141,362	35,013,349	78,128,013
Bituminous Mixtures—Paving and Other	90,171,833	44,312,195	45,859,638
Paints and Varnishes	18,102,428	4,984,792	13,117,636
Plumbing Equipment and Supplies	14,531,057	4,227,064	10,303,993

HOUSING AUTHORITY COMMITMENTS

Commitments by the United States Housing Authority for slum clearances in the State of California total $50,682,000 divided as follows: Los Angeles City—Loan contracts approved, $2,493,000; Los Angeles County—$5,682,000; Oakland—$2,591,000; San Francisco—$11,372,000.

BUILDING INDUSTRY SHOULD BE READY FOR EMERGENCY

MOBILIZATION of America's building industry "to serve the nation in peace or war" is urged by Edward D. Pierre of Indianapolis, president of the Indiana Chapter of the American Institute of Architects. Delay in developing a program of preparedness would be "suicidal," declares Mr. Pierre, who points out that "it is highly important that the industry realize this need before the Government does."

"The building industry is unprepared to meet any emergency that might arise," Mr. Pierre says. "It has little knowledge of its weakness or its strength, manpower and its physical resources. The surrounding dangers of increasing magnitude should be warning enough to the profession and the industry to prepare for any emergency that may present itself.

"The building industry is the nation's greatest normal peace time industry. It must realize its greatness and importance to the nation. By virtue of its vastness it has a tremendous influence on national well being. It has a public obligation and responsibility. A new order of relationship is needed. Every man in the industry should strive for solidarity. The forces of design, management, craftsman and materials should be welded into a united front.

"The American Institute of Architects should accept the challenge of leadership and initiate plans for aggressive action that will protect not only the interests of the industry but the nation as well. No one can contemplate the effects of war, especially one the extent of which is unknown, but some of its ill effects can be curbed by concerted, intelligent action. It would be suicidal to wait for these effects. The industry should concentrate on a program of preparedness that will serve the nation in peace or war.

"How the European war will affect the profession of architecture or the building industry is yet problematical. There will be reactions, some based on fact and some on imagination and opportunity. We have the history of similar circumstances. The same laws of greed and predatory motives that existed in the past exist today."

ANOTHER BUILDING INDUSTRY CENSUS

Starting in January the Department of Commerce, Bureau of Census, will conduct its fourth business census and the third in which the construction industry has been included. The report is expected to be completed by June 1940. Some of the high lights on the scope of the census, the plan of procedure and the basic facts to be collected, are summarized here.

Information to be presented in the census reports will include volume of business for the year 1939 (for each kind of business and for each state, county, and city or town of more than 2,500 population), how much was done on credit (open-account and installment separately), stocks on hand at the beginning and end of the year, accounts receivable, number of employees, total pay roll, extent of self-employment (proprietor-owners and unpaid family members), and other inquiries limited to particular fields of business as shown by the schedules such as breakdown of sales by commodities in the case of retailers and wholesalers or room capacity in the case of hotels.

Starting January 2, 1940, each place of business in the United States will be visited by census enumerators equipped with schedule forms who will obtain necessary reports. Concerns which close their books January 31 will report for their fiscal year. The field work will require a staff of 12,000 enumerators, working under approximately 550 supervisors directed by 100 area supervisors in census branch offices set up temporarily in convenient cities throughout the country. This is not a sample but a complete enumeration. Reporting is required by law. The field work will be completed within four or five months. At least the basic facts will be published by areas (States, counties, cities and towns) during 1940. Summaries by kinds of business, with additional trade data, will follow from month to month thereafter as rapidly as they can be tabulated and prepared in report form.

The business census will cover approximately 1,700,000 retailers, 180,000 wholesalers, 750,000 service businesses, 50,000 hotels and tourist camps or courts, 50,000 theaters and other places of amusement, 200,000 construction contractors and about 2,500 sales finance companies.

One construction schedule covers general contractors, sub-contractors, special trade contractors and speculative or operative builders, whether formally organized or in business as individuals.

CALIFORNIA HOME BUILDING AT PEAK

California home building, as a result of the lowest per person cost in five years, has reached the highest value and volume levels in nine years, according to C. J. Ryan, vice president of Investors Syndicate of Minneapolis.

A decline of $91.94 in per person building costs last year, the largest drop in more than nine years, brought such costs to $828.27, the lowest level since 1933, when they averaged $768.31 in thirteen California cities.

The California cities used in this nation-wide housing are: Alameda, Berkeley, Fresno, Long Beach, Los Angeles, Oakland, Pasadena, Sacramento, San Diego, San Francisco, San Jose, Stockton and Vallejo. They contain 52.83 per cent of the state's population.

"California ranks second in the nation in point of volume and value of new residences," explained Mr. Ryan in commenting on the new survey made by his company in 41 states and the District of Columbia, "being exceeded only by New York. Our study covered 310 cities, comprising two-fifths of the nation's population."

ARCHITECTS' BULLETIN

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Northern Section

STATE ASSOCIATION MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

Editor

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State Convention

FROM the Southern Section comes word that the headquarters for the Santa Barbara Convention, October 26, 27 and 28, has been changed from the Biltmore to the Samarkand. By the time this note is in print, complete information as to rates and programs will probably be in the hands of all members. Presumably the usual order of events will prevail—joint Executive Board and State Board of Examiners meeting Thursday night, October 26th, with reunion of the early birds, those veteran convention hounds who like to foregather and get settled, renew last year's friendships, roll a few logs, limber up the old elbow joints.

Friday, October 27th, registration and first session, followed by luncheon and special afternoon program and winding up with the hospitality hour and the convention banquet. Santa Barbara always puts on a good show.

Saturday, October 28th, morning session, probably completing all convention business by lunch time; then golfing and touring with an informal celebration of libation, food, fellowship—and fun, and so to bed at the end of the week, and of the Association year.

Among the most points to be discussed at the Convention there is sure to be attention given to that complicated and difficult situation which involves all the professions, firms and persons who do contract work for the State, but are not in civil service. Apparently it will require a constitutional amendment to straighten this out; and architects form but one, and one of the smaller groups affected. Some policy of cooperation with other professions and organizations is likely to be formulated at this Convention.

DRAFTSMEN'S SOCIETY

The Executive Board has voted to invite a representative of the California Society of Draftsmen to attend the regular monthly meetings of the Board. This is in line with previous actions of the Board, and carrying out the expression of opinion at the 1938 Convention, to promote a closer friendly relationship between the Association and the Society.

CARPENTER APPRENTICESHIP

It is pleasant and encouraging to record the arrangements and commencement of apprentice training with the San Francisco Bay District Carpenters.

The Apprenticeship Committee of the Associated General Contractors in San Francisco concluded its negotiations with the carpenters and the agreement was duly signed on August 2nd by D. H. Ryan, Secretary of the Bay Counties District Council of Carpenters. Harold Smith, of Dinwiddie Construction Company, who was appointed Chairman of the Chapter Committee for

STATE ASSOCIATION CONVENTION AT SANTA BARBARA

The State Association of California Architects holds its 12th Annual Convention at the Hotel Samarkand, Santa Barbara, commencing October 26 and continuing through Saturday, the 28th. The Southern California Section of the State Association will act as hosts and promise of a memorable meeting is indicated by the variety of the program which follows in next column:

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its negotiations, pointed out that the agreement is not conformative with Assembly Bill 1750 as of recent session of the Legislature. Provision is made for one apprentice to be employed to four journeymen.

The standing committee on apprenticeship training, etc., is composed of Harold Smith and Wm. E. Hague, representing the contractors, and Alexander Watchman, Martin L. Bavage and W. M. Johnson, representing Bay Counties District Council of Carpenters. At a meeting held some three months ago, Secretary-Manager Wm. E. Hague was elected Chairman, and Alexander Watchman, Secretary.

Some 300 young men in San Francisco are now indentured apprentices and in training. Similar apprenticeship agreements exist in all other cities of Northern California. The agreement covering San Francisco apprenticeship system is a comprehensive doctrine and gives the joint committee full power to regulate apprenticeships and to make such suggestions from time to time as may be approved.

Indentured apprentices must attend night classes no fewer than 4 hours weekly, or a minimum of 144 hours per year. In San Francisco these night classes will be conducted at Buena Vista School. The period of training covers four years, but provision is made that apprentices of exceptional ability may be advanced more rapidly if, in the opinion of the committee, the diligence and skill entitles to such advancement. The wages to be paid are set forth as follows:

FIRST YEAR	
1st 3 months	30% of Journeyman's Wage
2nd 3 months	35% of Journeyman's Wage
3rd 3 months	40% of Journeyman's Wage
4th 3 months	45% of Journeyman's Wage
SECOND YEAR	
1st 6 months	50% of Journeyman's Wage
2nd 6 months	60% of Journeyman's Wage
THIRD YEAR	
1st 6 months	65% of Journeyman's Wage
2nd 6 months	70% of Journeyman's Wage
FOURTH YEAR	
1st 6 months	80% of Journeyman's Wage
2nd 6 months	90% of Journeyman's Wage

Graduating apprentices will be issued a certificate. They need not be steadily employed by the contractor to whom they are originally indentured. The contractors are only obligated to employ such apprentices during the time they may have work for them, but the apprentices must report back to the committee for re-employment.

THURSDAY, OCTOBER 26th

Thursday Morning—The State Board of Architectural Examiners, both Northern and Southern Districts, will hold their joint annual meeting at the hotel all day. The Executive Boards of the Northern and Southern Sections of the State Association of California Architects will also meet informally with the State Board of Architectural Examiners.

Thursday Afternoon and Evening—The Registration and Credential Committee will receive and register Delegates to the Convention.

6:00 P.M.—Song, laughter and cocktails. Obligatory for the ladies; optional for Architects.

7:00 P.M.—Informal dinner at the hotel.

8:00 P.M.—The Northern and Southern Section Executive Boards will hold their annual joint meeting.

FRIDAY, OCTOBER 27th

10:00 A.M.—The Convention will open. President Sylvanus B. Marston presiding.

Address of Welcome—The Honorable Patrick J. Maher, Mayor of the City of Santa Barbara.

Address—"The Key to the City," Mr. Harry R. Hancock, President of the Chamber of Commerce.

Address—"Review of the Year's Activities," Mr. Sylvanus B. Marston, President of the State Association of California Architects.

Reports of Officers.

Reports of Association Delegates to the American Institute of Architects Convention.

Reports of Committees.

12:00 Noon—Informal Luncheon at the hotel followed by address by Mr. Wm. O. Harris, Production Manager, Federal Housing Administration, and Past President Kiwanis International.

1:45 P.M.—Recess.

2:00 P.M.—Afternoon Session. Mr. Louis N. Crawford, Vice-President of Southern Section presiding. Continuation of Committee Reports.

2:00 P.M.—Tour of Gardens for ladies will leave Recreation Center under the direction of the California Garden Clubs Association, with tea being served at the John Du Bois Wach residence at five o'clock. Architects will be welcome at the tea.

3:00 P.M.—Business and Open Forum.

Address—William A. Simpson, "How to Make an Estimate."

Topics for discussion:

(a) Relationship of the Architects to the Manufacturer.

(b) How can the Producers' Council be more useful to the Architect? By a producer member.

(c) Is a Junior Certificate feasible for a limited architectural practice.

6:00 P.M.—Song, laughter and cocktails. Obligatory

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ALAMEDA COUNTY DISPLAYS OWN PRODUCTS

KRAFTILE USED FOR PERMANENT EXHIBIT BOOTH AT STATE FAIR

GLAZED terra cotta wall units and machine run shapes of Kraftile Company of Niles are used to advantage in the only permanently constructed exhibit booth at the California State Fair Grounds in Sacramento.

Built in 1936 when it received two awards ("Merit of Clay Products" and "Merit in Construction and Design"), the booth was a point of interest during the recent State Fair with its display of wines, flowers, tile and pottery, salt, fruits and other products of Alameda County.

In buff, brown, yellow and green, the glazed surfaces are attractive in design and in quality of color. Permanence of color and ease of cleaning were major points in the selection of tile for the booth.

Lettering in panels above the entrances is in Kraftile's manzanita brown. The letters are raised 3/4 of an inch above the panel of San Gabriel yellow, a warm hue well known in California. The border surmounting these panels is of manzanita brown, as well as the central flutings of the columns and the baseboard. A buff of desert tone and a soft green, Kraftile's laguna green, complete the color scheme, the buff being used as outline of design and the green in the fluted wall units and the bases of the letter panels.

STATE BUILDERS' EXCHANGE

At the annual meeting of the California State Builders Exchange, Ltd., September 21-23, A. O. Calhoun of Santa Monica was elected president; W. G. Thornally of Oakland first vice-president; Donald B. Kirby of Santa Ana, second vice-president; W. T. Drury of Bakersfield, third vice-president; Joe Waugh, Santa Monica, secretary, and Harry Cayford, Fresno, treasurer and assistant secretary.

Members of the executive committee for the coming year will be: W. H. George, San Francisco; P. M. Sanford, Richmond; George J. Haddix, San Pedro; Charles W. Pettifer, Long Beach, and Ralph E. Homann, Los Angeles.

Long Beach was selected for the 1940 convention.

NEW STANDARD FOR ENAMELED WARE

Under date of July 12 a Recommended Commercial Standard for Sanitary Cast Iron Enameled Ware was circulated for written acceptance. Since that time signed acceptances from a number of manufacturers, distributors and users estimated to represent a preponderant majority have been received and the new standard, identified as CS77-39, became effective for production October 10.

CALIFORNIA BUDGETS $12,000,000 FOR BUILDINGS

LOOKING toward the work at the present time confronting the Division of Architecture of the California Department of Public Works, there is a total of $12,298,288 available for construction, improvements, and equipment for the various State institutions and departments.

Some of the outstanding projects listed for the current biennium include the Acute Psychiatric Hospital Unit to be constructed for the Department of Institutions to be operated in conjunction with the University of California Hospital in San Francisco; the starting of the erection of new State Colleges at Santa Barbara and San Francisco; the construction of the Southern California State Prison for first offenders at Chino; and, although of comparatively small cost but nevertheless outstanding, due to the disturbance of old walls and fixtures, the alteration and modernization of the Governor's office in the State Capitol at Sacramento.

Available State funds for construction, improvements, and equipment for the biennium are listed as follows:

Agnew State Hospital	$ 89,650
Acute Psychiatric Hospital, San Francisco	500,000
California Polytechnic School	131,000
California School for Blind	68,000
California School for Deaf	151,300
California National Guard	102,974
Camarillo State Hospital	2,781,460
Chico State College	30,075
Department of Agriculture	60,830
Department of Public Health, Berkeley	10,000
Division of Parks	60,000
Fish and Game Commission	138,600
Folsom State Prison	110,000
Forty-fourth District Agricultural Association, Colusa	19,000
Fresno State College	180,000
Highway Maintenance Station, Ojai	14,400
Highway District Office Building, Los Angeles	300,000
Humboldt State College	223,390
Industrial Home for Adult Blind	3,500
Mendocino State Hospital	561,625
Napa State Hospital	309,500
Norwalk State Hospital	198,900
Pacific Colony	75,335
Patton State Hospital	216,850
Preston School of Industry	400,050
San Diego State College	303,500
San Francisco State College	415,000
San Jose State College	293,500
San Quentin State Prison	274,900
Santa Barbara State College	567,000
Sonoma State Home	209,440
Southern California State Prison, Chino	1,682,579
Sixth District Agricultural Association, Los Angeles	9,550
State Buildings, Improvements at Sacramento, San Francisco and Los Angeles	397,991
State Narcotic Hospital	150,000
Stockton State Hospital	661,000
Sutter's Fort, Sacramento	30,000
Third District Agricultural Association, Chico	6,500
Ventura School for Girls	12,800
Veterans' Home	470,439
Whittier State School	67,650
Woman's Relief Corps Home	10,000
Total	$12,298,288

The Division of Architecture has been functioning since 1907—32 years—and is the agency through which all the obligations of the Department of Public Works, in connection with State institutions and departments, are discharged.

The Division is also vested with authority under the police power of the State and directed to supervise the construction of all new school buildings, the reconstruction, alteration of or addition to all school buildings used for elementary, secondary or junior college school purposes.

The word "architecture" might lead one to assume the Division's time is devoted to designing and planning structures of a classical or monumental character. On the contrary the State's buildings are now designed with maximum simplicity, economy, practicability and efficiency.

The duties and activities of the Division cover a wide field.

In addition to designing, planning, and constructing buildings of every nature to meet the diversified requirements for State mental hospitals, prisons, reformatories, homes and schools for the blind, deaf and feeble-minded, armories and national guard encampments, colleges, agricultural exhibits and grandstands, office buildings, etc., the Division cares for all alterations and repairs to existing buildings.

STATE BOARD APPOINTEES

Governor Culbert L. Olson of California has made the following appointments on the State Board of Architecture: Harry J. Devine of Sacramento to succeed himself; Ernest Weihe of Bakewell and Weihe, San Francisco, replacing C. J. Ryland of Monterey; David J. Witmer of Los Angeles, succeeding Harold Chambers of Los Angeles and Ben H. O'Connor in place of Harold E. Burket of San Diego.

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San ancisco and the Bay District. There may slight fluctuation of prices in the interior d southern part of the state. Freight rtage, at least, must be added in figuring untry work.

nd—1½% amount of contract.

ckwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

OLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

OLLOW BUILDING TILE (f.o.b. jab)

arload lots.

3x12x5½	$ 94.50
6x12x5½	73.50

ilding Paper—

ply per 1000 ft. roll	$3.50
ply per 1000 ft. roll	5.00
ply per 1000 ft. roll	6.25
saltkraft, 500 ft. roll	5.00
ash card com. No. 7	$1.20 per 100 ft.
ash cord com. No. 8	1.50 per 100 ft.
ash card spat No. 7	1.90 per 100 ft.
ash card spat No. 8	2.25 per 100 ft.

ash weights cast iron, $50.00 ton.
ails, $3.50 base.
ash weights, $45 per ton.

oncrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
ap sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

ND—

	Bunker	Delivered
River sand	$1.40	$1.80
Napis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and $2.20	
Del Monte white	50c per sack	

MENT (all brands, cloth sacks) $2.72 per bbl. o.b. car.; deliv. $2.90 per bbl., carload lots; ess than carload lots, warehouse or delivered, 0c per sack. (Less 10c per sack returned, 2% 0th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White
Calaveras White
Medusa White
{ 1 to 100 sacks, $2.00 sack, warehouse or delivery; over 100 sacks, $1.25; 2% discount 10th of month.

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.

(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices very according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	⅝x2¼" T&G	⅜x2" T&G	⅝x2" Sq. Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$133.50 M
Sel. Otd. Oak	118.00 M	101.00 M	106.50 M
Clr. Pla. Oak	120.00 M	102.00 M	107.50 M
Sel. Pla. Oak	113.00 M	92.00 M	99.50 M
Clr. Maple	124.00 M	105.00 M	

Wage—Floor layers, $10.00.

Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skyliahts), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron—Cost of ornamental iron, cast iron etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$36.00 per M
No. 2 common	29.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	26.00 per M
1x4 No. 2 flooring VG	60.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	65.00 per M

Slash grain—

1x4 No. 2 flooring	$43.00 per M
1x4 No. 3 flooring	40.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.20 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheething (unsanded) 5/16" 3-ply and 48"x96"	$32.50 per M
"Plywall" (wallboard grade)— ¼" 3-ply 48"x96"	$38.50 per M
"Plyform" (concrete form grade)— ⅝" 5-ply 48"x96"	$110.00 per M
Exterior Plywood 5-ply— 7/16" 5-ply Fir	$ 90.00 per M
Redwood	$100.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $90.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot.

Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.

For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work	per yard 42c
Three-coat work	per yard 60c
Cold water painting	per yard 10c
Whitewashing	per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.60
2 coats, lime mortar hard finish, wood lath	.70
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	1.10
Ceilings with ¾ hot roll channels metal lath plastered	1.85
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4 inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.80
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.10
2 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.40

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50
Wood lath, $7.50 to $8.00 per 1000.	
2.5-lb. metal lath (dipped)	.17
2.5-lb. metal lath (galvanized)	.20
3.4-lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.28

¾-inch hat roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations. $13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.50 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to grade quantity and runs.

Roofing—

"Standard" tar and gravel, $6.50 per sq. for 30 sqs. or over.
Less than 30 sqs. $7.00 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Copper $16.50 to $18.00 per sq. in place.
Cedar Shingles, $8.00 per sq. in place.
Re-coat, with Gravel, $3.50 per sq.
Asbestos Shingles, $15 to $25 per sq. laid.
Slate, from $25.00 per sq., according to color and thickness.

Shakes—1x25" resawn	$11.50 per sq.
½x25" resawn	10.50 per sq.
½x25" tapered	10.00 per sq.

Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in place
Sandstone, average Blue, $4.00, Boise $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.— (See Dealers' Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—

40c per square foot and up. Installation extra.

THE BUILDERS' EXCHANGE OF SAN FRANCISCO STANDARD WAGE SCALE

For mechanics employed on construction work in the Bay Region. Effective September 1, 1937

CRAFT	Journeymen Mechanics
Asbestos Workers	$ 8.00
Bricklayers (6h-5d)	10.50
Bricklayers' Hodcarriers (6h-5d)	6.75
Cabinet Workers (Outside) (5d)	8.00
Caisson Workers (Open)	6.40
Carpenters (8h-5d)	10.00
Cement Finishers (8h-5d)	10.00
Cork Insulation Workers (8h-5d)	9.00
Electric Workers (8h-5d)	11.00
Electrical Fixture Hangers	8.00
Elevator Constructors	10.40
Engineers, Portable & Hoisting	9.00
Glass Workers (8h-5d)	9.68
Hardwood Floormen	9.00
Housesmiths, Architectural Iron (Shop) (8h-5d)	9.00
Housesmiths, Architectural Iron (Outside) (8h-5d)	10.00
Housesmiths, Reinforced Concrete or Rodmen (8h-5d)	10.00
Iron Workers (Bridge and Structural) Including Engineers (8h-5d)	12.00
Laborers, Building (8h-5d)	$ 6.00
Laborers, Common (8h-5d)	6.00
Lathers, Channel Iron (6h-5d)	9.00
Lathers, All Others	9.00
Marble Setters (8h-5d)	10.50
Marble Setters' Helpers (8h-5d)	6.50
Millwrights	9.00
Model Makers ($1.50 per hr-6h)	9.00
Modelers ($2 per hr-6h)	12.00
Model Casters	7.20
Mosaic and Terrazzo Workers (Outside)	9.00
Painters (7h-5d)	8.75
Painters, Varnishers and Polishers (Outside)	8.75
Pile Drivers and Wharf Builders	9.00
File Drivers' Engineers	10.00
Plasterers (6h-5d)	10.00
Plasterers' Hodcarriers (6h-5d)	7.50
Plumbers (8h-5d)	11.00
Roofers, Composition (8h-5d)	9.00
Roofers, All Others (8h-5d)	8.00
Sheet Metal Workers (8h-5d)	10.00
Sprinkler Fitters	10.00
Steam Fitters (8h-5d)	$11.00
Stair Builders (8h-5d)	9.00
Stone Cutters, Soft and Granite (8h-5d)	8.00
Stone Setters, Soft and Granite	12.00
Stone Derrickmen	9.00
Tile Setters (8h-5d)	11.00
Tile Setters' Helpers (8h-5d)	6.50
Tile, Cork and Rubber (8h-5d)	9.00
Welders, Structural Steel Frame on Buildings	11.00
Welders, All Others on Buildings	9.00
Dump Truck Drivers, 2 yards or less	6.00
Dump Truck Drivers, 3 yards	6.50
Dump Truck Drivers, 4 yards	7.00
Dump Truck Drivers, 5 yards	7.00
Dump Truck Drivers, 6 yards	7.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	6.50
3 yards	7.00
4 yards	7.50
5 yards	7.50
6 yards	8.00

GENERAL WORKING CONDITIONS

1. Eight hours shall constitute a day's work for all crafts except as otherwise noted.
2. Plasterers' Hodcarriers, Bricklayers' Hodcarriers, Roofers' Laborers, and Engineers, Portable and Hoisting, shall start 15 minutes before other workmen, both at morning and at noon.
3. Five days, consisting of not more than eight hours a day, on Monday to Friday inclusive, shall constitute a week's work.
4. Transportation costs in excess of twenty-five cents each way shall be paid by the contractor.
5. Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturdays (except Laborers), Sundays and holidays, from 12 midnight of the preceding day, shall be paid double time.
6. On Saturday, Laborers shall be paid straight time for an eight-hour day.
7. Where two shifts are worked in any twenty-four hours, shift time shall be straight time. Where three shifts are worked, eight hour's pay shall be paid for seven hours on the second and third shifts, allowing one-half hour for lunch.
8. All work, except as noted in paragraph 9, shall be performed between the hours of 8 a.m. and 5 p.m.
9. In emergencies, or where premises cannot be vacated until the close of business, men then reporting for work shall work at straight time. Any work performed on such jobs after midnight shall be paid time and one-half up to four hours of overtime and double time thereafter, provided, that if a new crew is employed on Saturdays, Sundays or holidays which has not worked during the five preceding days such crew shall be paid time and one-half.
10. Recognized holidays to be: New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Christmas Day.
11. Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours' pay.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

282. FLOOR FURNACE

New information concerning the ohn Zink floor furnace has been re-ived from that company. A small lder and a single sheet containing ta relative to cost installation and el economy is ready for issue to ose interested. Send in the coupon.

283. SOUND-PROOFING

Another of those interesting little ooklets from the Celotex Corpora-on; "The Quiet Forum"—this one eals with schools and the absolute eed for quiet as epitomized in Celo-x sound proof products.

284. DOORS—ELECTRIC

Barber-Colman Company have a rochure illustrating their new over-ead type doors electrically operated. pecifications are included. Send for copy.

285. CLEAN MARBLE

Vermont Marble Company have rwarded an interesting booklet that eals with the "care and cleaning of arble." Send the coupon for your opy.

286. ILLUMINATION

"Beauty Reflected In Lights" is the bject of a booklet just received from e Pacific Coast Electrical Bureau. contains some timely information nd is well illustrated. Send for a opy by using the coupon.

287. ELECTRICAL CONVENIENCE

The same Bureau has another book-t, very practical and with some ex-ellent points for the layman and omeowner. It is called "The Key o Electrical Convenience In Your ome."

288. INSULATION WOOL

From the Pacific Lumber Company omes a nicely arranged booklet tell-g the story of their new product Palco Insulation Wool." The coupon ill bring you a copy.

289. MORE INSULATION

A system for sound insulation, using balsam-wool, is described in detail in a broadside by the Wood Conversion Company. This wool acts as an absorptive agent to noises usually passing through walls and floors. Use the coupon below.

290. AIR CONDITIONING

Room by Room air conditioning and heating as you wish it is the subject covered in a booklet just sent out by the Carrier Corporation. The booklet states that this system is a dual one and is especially adapted for residence use.

291. DUST REMOVER

The same company has a booklet on the removal of pollen from rooms. In these days of alergy to so many types of dust and pollen this should prove useful. Send for a copy.

292. AIR HEATERS

Despatch Oven Company have a new brochure covering the points of their indirect air heaters. This company manufactures ovens for every imaginable need, from commercial to residence.

293. WESTERN PINES

Western Pine Association has a new booklet and as always their literature is well arranged with excellent illustrations. The literature is called "Western Pines." Send for your copy.

294. OIL BURNER

Improved type of oil burner operating on a new principle is illustrated in a broadside put out by Bethlehem Foundry and Machine Co. The name of "Dynatherm" has been given the device. The coupon will insure getting your copy.

295. ARTIFICIAL LIGHTING

Industrial Lighting Equipment is the subject of a data sheet issued by Westinghouse. "Sollite Luminaires" is the trade name given a specific type of this equipment.

296. FOR BOILER ROOM

"Boiler Room Instruments" is the title of a booklet put out by Brown Instrument Company. It is extremely well gotten up and has technical illustrations and pertinent data.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
68 Post Street
San Francisco, Calif.

Please send me literature on the following items as checked below. This request places me under no obligation.

282 ☐	289 ☐
283 ☐	290 ☐
284 ☐	291 ☐
285 ☐	292 ☐
286 ☐	294 ☐
287 ☐	295 ☐
288 ☐	296 ☐

My Name .....

Name of Company .....

Street .....

City ..... State .....

STATE CONVENTION

(Continued from Page 58)

for the ladies; optional for the Architects.

7:30 P.M.—Banquet, informal, in the Hotel Dining Room for Architects, ladies, guests and Producer Council Members. Louis J. Gill presiding. The speakers will be Patterson McNutt and Dr. Harry Girvetz.

SATURDAY, OCTOBER 28th

10:00 A.M.—Mr. Gwynn Officer, President of the Northern Section and Vice-President of the State Association, presiding.

Announcements.

Address—Millard Sheets on "Use of Color in Architecture."

Report of Committee on Resolutions.

Unfinished business.

Adjournment.

Immediately upon adjournment of the Convention, the Northern and Southern Section Executive Boards will meet separately for the election of officers for the ensuing year.

12:00 Noon—Luncheon at the hotel. Winsor Soule presiding.

Music and entertainment. The ladies will be present.

2:00 P.M.—Swimming Contest in Hotel pool for men and ladies. Prizes. Tennis on Hotel courts for men and ladies. Prizes. Cards and Bridge at Hotel for ladies, with door prizes.

Annual Golf Tournament for the Delegates, their guests and ladies at the Montecito Golf and Country Club. Prizes.

5:30 P.M.—Cocktail Party at the Montecito Golf and Country Club.

6:30 P.M.—"Sports Dinner" at the Montecito Golf and Country Club, Chas. J. McIver, President of the Producers' Council Club of Southern California, presiding. The ladies will be present — fun will prevail.

7:45 P.M.—Producers' Club "Hi-Jinks."

9:00 P.M.—Presentation of prizes.

HOTEL RATES—American plan: Two persons in a room, twin beds, private bath, $7.00 per person. For those not registered at hotel—Banquet $1.75, Luncheon $1.25 per plate.

COMMITTEES FOR THE CONVENTION

Executive Committee: Winsor Soule, Chairman; Harold E. Burket, Robert H. Orr.

Registration and Credentials: Henry W. Howell, Chairman; Harold E. Burket, Louis N. Crawford, Wm. A. Edwards, E. Keith Lockard.

Entertainment: Lutah Maria Riggs, Chairman; Architects' Committee; Chester L. Carjola, Roy W. Cheesman, E. Keith Lockard. Producers' Council Committee; J. W. Marlo, A. E. Barnes, Floyd Irwin, B. A. Lum.

Resolutions: John Frederic Murphy, Chairman; Wayne H. Hertzka, Samuel E. Lunden.

Publicity: Leonard A. Cooke, Chairman; Architects' Committee; W. D. Peugh, Merrill W. Baird. Producers' Council Committee: J. W. Marlo, A. E. Barnes, J. H. Soldini.

Committee: Harold E. Burket, Wm. A. Edwards. Producers' Council Committee: John Vandenburgh, W. J. Curry, W. R. Steyer.

Ladies' Entertainment: Mrs. Henry W. Howell, Chairman; Mrs. Ralph W. Armitage, Mrs. Chester L. Carjola, Mrs. Roy W. Chessman, Mrs. Leonard A. Cooke, Miss Audrey Lockard, Mrs. John Frederic Murphy, Mrs. Winsor Soule.

General Committee: Winsor Soule, Chairman; John C. Austin, Ralph W. Armitage, Merrill W. Baird, Chester L. Carjola, Harold C. Chambers, Louis N. Crawford, Clarence Cullimore, Walter L. Culver, Jr., Pierpont Davis, Manfred De Ahna, Robert V. Derrah, Ralph C. Flewelling, Breo. Freeman, Geo. E. Gable, Sam W. Hamill, Lester H. Hibbard, Frank L. Hope, Jr., William Templeton Johnson, Donald B. Kirby, Samuel E. Lunden, Ben H. O'Connor, Scott Quintin, George D. Riddle, Lester G. Scherer,

CONVENTION TOPICS

The Editor:

Does a convention become a convention? That is to ask, does it always follow custom, precedent, policy or some predetermined general arrangement? A convention program is usually framed by a committee appointed in the rush days of a closing year. It evidently has in mind a smooth going arrangement of events over a fixed time and fixed hours within that time for presentation of the subject matter. This is as it should be for otherwise a convention would get out of control and might end in an uproar.

A convention committee should not be of a belligerent frame of mind for it is easy to start something that might not be easily finished, but it is reasonable to expect that a convention committee has felt the pulse of the year's work and will guide its program accordingly. It should see that the reports are going to be informative, that the outline for advance is progressive even though it may have a few knots in it that will try the patience of the convention to untie. Then there comes a time when a spade is recognized as a spade and it may be the part of wisdom to "speak softly but use a big stick." To such the convention dedicates its course even though it may not be fully charted upon the program.

The nature of a program should cover the most important happenings throughout the year and relegate to the waste inconsequential things that use up time and try ones patience. It should indicate that the matters that are to come before it should be comprehensive so as to leave no room for doubt about its intent and purpose. It should be constructive, progressive, entertaining and restful. The Convention Committee would be derelict in its duty if all of these attributes were not in evidence and the whole affair made pleasant and profitable to the delegates.

It is our custom (the State Association I mean) to convene once a year as a clearing house, report the past and preview the future. To those who have followed events closely since last we met it must be evident that the future practice of architecture is not without its pitfalls; not that there has set in a retrogression, such as has been experienced in past ages by the decadency of a style in architecture and the introduction of something new, and yet there appears on the horizon a pronounced breaking away from conventional periods in architecture. This should be of little concern, for whatever the change in architectural design there will always be the restraining influence of public opinion and conservatism among professional men who will balance the good against the evil and determine the destiny of architecture for an enlightened people.

And while we follow the printed program we will reflect upon a few thoughts that have occurred to us about which we will want to ask a few questions, perchance:

What were the leading incidents that killed our legislative bill?

Why is it that a contractor, a member of the State Registration Board of Contractors, opposes architects each legislative year?

Why doesn't the Governor appoint an architect to the Department of Public Works, Division of Architecture?

How is Unification progressing as reported from the A. I. A. Convention?

Is Report Service a going concern?

Are we a combination in restraint of trade?

How best can we wrest from the bureaucratics that which they have taken away from us?

Why does it take ten architects to preside over the State Board of Architectural Examiners?

Should they grant sub-grade licenses to practice architecture?

Should all cities of the State of California have a uniform building code?

How best can this be brought about?

Should architects beginning practice do contracting work and of what benefit would it be?

Then, have you noticed the improvement in our western trade and architectural magazines, the Southwest Builder and Contractor and The Architect and Engineer?

All of this with those social hours thrown in. What a time we will have!

Whom shall we meet? Old friends who have been there oft before. New faces who come for the first time. Men from a distance who know the value of these meetings. The Producers Council group who are always "Johnny on the spot" when it comes to "Hi-Jinks." The retiring officers whom we bid goodbye with a sigh, and the newly elected ones to whom we joyously wish success. These and other things fully worthy of mention constitute a real convention.

Robert H. Orr, Architect

Los Angeles, Oct. 8, 1939.

HOUSE SHORTAGE PREDICTED

A tremendous reservoir of potential building for present and future use exists in the United States to challenge the ingenuity of both Government and private enterprise, since relatively little residential construction has been undertaken since 1930, according to a survey of the building industry entitled "Housing and Homes" in the current issue of The Index published by The New York Trust Company.

"The United States Housing Authority," The Index points out, "basing its conclusions upon studies made by the Department of Commerce and by the WPA, estimates that the country today needs 6,000,000 new dwelling units and that by 1950 increases in the number of families and the depreciation of existing homes will require an additional 10,000,000 dwellings, so that, in all, about 16,000,000 new dwellings will be required by 1950.

"Progress in solving the public housing problems in the United States has been retarded by many factors. Encouragement arises, however, from recent Government projects and from the research and experience that are making possible privately financed undertakings which are much nearer the economic capacity of larger numbers of the population.

"Indications are that communities may profitably direct more individual effort to slum clearance than to rely entirely or too heavily on the Federal Government. Conditions vary so widely in a country as large as the United States that a local attack on the problem seems logical and preferable.

"Rather than to consider housing as a means to employment the objective should be the erection of the maximum number of homes for those now living in slums and sub-normal dwellings and the execution of this program as economically as possible.

"Two factors which may lead to greatly expanded activity in the building industry are the further development of large, well-organized and properly financed corporations to engage in the construction of homes and apartment houses for both rental and sale, and greater stability of labor relationships in the industry. And it is encouraging to report that considerable progress in both these directions has already been made.

"In the United States, mass production methods have brought more services and commodities within the reach of a larger number of people than in any other country. Adapting similar techniques to the American construction industry is the challenge that confronts it today. Given appropriately favorable conditions, construction financed by private endeavor may provide a substantial stimulus to industry generally."

USED HOUSES IN DEMAND

There are as many arguments for "used houses" as for used cars and there is "ample room in the present market for the sale of both new and used homes," Ivan D. Carson, Deputy General Manager of the Home Owners' Loan Corporation, says in a message directed to some 25,000 real estate brokers who deal in homes.

"Too many of us think in terms of thousands of dollars and talk thousands of dollars to our prospective home buyer isn't thinking in terms of thousands of dollars at all. He is thinking of just how much it will cost him each month to own a home.

"That is logical. Today he buys his automobile, furniture, refrigerator or radio out of income. Why shouldn't he buy a home that way?

"In the old days, a man looked forward to the time when, in middle life, he could save enough to buy a home. After he had accumulated a few thousand dollars by hard saving and thrift, he bought a home and signed a first mortgage for three to five years, and unless he was lucky, he took a second mortgage at the same time. Then, he entered a financial bout which threatened him with the count every three to five years, when his paper became due. At best, he was constantly renewing paper and paying commissions. If he was very lucky he might beat the game by the time he had reached old age.

"Contrast that with buying a home on the HOLC plan. No renewals, 4½ per cent interest, $7.65 per thousand a month, and in 15 years the house is his. It comes down to this—any man who is paying rent, has a job and enough cash to make a small down payment, and his credit report shows he is honest and pays his bills, can buy an HOLC home within his means and his only investment outside his down payment, taxes and upkeep will be the money he would otherwise spend for rent."

Mr. Carson stressed the fact that the HOLC has homes available in every price range, with some 85,400 properties now listed on its books. He reported that the Corporation to date has sold 63,197 properties, or more than 42 per cent of all it has been forced to acquire. More than 90 per cent of the homes the Corporation holds, which are available to yield income, are rented at the present time, with property management operations representing a clear profit to the Corporation of more than $5,900,000 to date.

All HOLC sales are made through private brokers, Mr. Carson said. There are now 2,833 contract brokers handling HOLC properties and 22,453 approved sales brokers. Brokers' commissions thus far have amounted to more than $17,880,000.

In presenting arguments for the sale of used homes, Mr. Carson did not confine himself to HOLC properties, but emphasized the value inherent in all types available from mortgage institutions.

"There are many advantages to offer prospective home buyers when you talk of used homes," he pointed

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out. "You well may be able to offer greater stability of neighborhood. Used homes, generally speaking, are located in sections which are well settled, nearer schools, shopping centers, churches and transportation. It is not necessary to pioneer a neighborhood as is so often the case when buying in new subdivisions.

"Many old houses are roomier and better constructed than new ones. Lots are generally larger. Again, as in the case of used cars, the depreciation in price is usually far greater than the actual depreciation in value of the property. Many used homes are unqualified bargains, representing the soundest kind of an investment.

"Last, but not least, there are hundreds of thousands of families which are not in circumstances that permit them to take on the burden of new homes, who still can find means to purchase old ones. In the used homes in the United States may be found a partial answer to shelter many of those who today are improperly housed."

BECOMES FEDERAL CONSULTANT-ENGINEER

Dr. George Albert Soper, well-known consulting engineer and expert in the field of public sanitation, has been appointed a consultant in the United States Housing Authority.

Dr. Soper, who has been assigned to the Management Division of the USHA, has directed the construction of filtration plants in many cities and was engineer in charge of sanitary work in the rehabilitation of Galveston, Texas, after the disastrous storm of 1900.

NATHAN D. WHITMAN

Nathan D. Whitman, for 32 years a resident of Southern California, passed away September 29 at Huntington Memorial Hospital, Pasadena. He was 61.

Mr. Whitman was chief engineer of the American Concrete & Steel Pipe Company, having been affiliated with that industry for 25 years. He was widely known also as a consulting engineer, being an outstanding authority on concrete pipe.

Born at Boston, Massachusetts, March 23, 1878, Mr. Whitman was educated at the Massachusetts Institute of Technology.

SAN FRANCISCO SECTION A. S. C. E.

The Nominating Committee of the San Francisco Section, American Society of Civil Engineers, has made its report of candidates for office in 1940. Harold Hammill is named for president, while Walter Dreyer, Charles H. Lee and Leon H. Nishkian are the nominees for Vice-President.

The regular bi-monthly meeting of the Section was held at the Engineers' Club Tuesday evening, October 17th, when a paper was read by Harold F. Gray, Sanitary and Hydraulic Engineer, on "Ancient Civilization and Modern Sanitation."

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BUSINESS RECOVERY MEETING

Opportunities for still further accelerating construction as an aid to business recovery will be considered at a National Construction Conference to be held under the auspices of the Chamber of Commerce of the United States at Washington, November 16 and 17.

The purpose of the conference is to point to obstructions checking the flow of private funds into capital expenditures and to suggest means for their removal. These obstacles, in the opinion of the construction and allied interests, mark a weak point in the country's emergence from the depression.

Associated with the Chamber in setting up the conference are all divisions of the construction industry—manufacturing, contracting and distributing—as well as professional groups and mortgage financing institutions.

"The stimulation of private construction work has become more—and not less—important as a result of the outbreak of war in Europe," says a statement by the Conference's Program Committee. "The committee is going forward with its plans as earlier contemplated, but has added a discussion of the possible effects of the war on building.

"The opening session will be devoted to a consideration of the relation of the industry to American progress including an appraisal of recent criticism of the industry."

IRVING K. POND, ARCHITECT

Irving K. Pond, internationally known architect, and nestor of the architectural profession in Chicago, died while attending the Institute Convention in Washington, D. C., September 29. He was seen at the various convention meetings prior to his collapse on the 28th. He was 82. His work is scattered throughout the United States, some of it as the winner of national competitions. His body was cremated and his ashes taken to Ann Arbor, Michigan. Mr. Pond was an honorary member of the San Francisco Architectural Club.

STATE ASSOCIATION AT A.I.A. CONVENTION

One of the gratifying things disclosed at the recent A.I.A. convention was the splendid showing made by the State Associations and Societies which now number 27 as compared with sixteen in 1938. The Institute Directors are expected to submit a program of unification to the 1940 convention.

The office of State Association Director was officially written into the by-laws, thereby giving State Association members a voice in Institute affairs between conventions.

NEW PLANT

The Harer Perry Company has changed its name to the Harer Furnace & Supply Company and has moved from Keith Avenue to 829 31st Street, Oakland. The new plant, much larger, is convenient to all of the firm's growing East Bay business.

BENEFITS OF CENTRAL VALLEY PROJECT

The East as well as the West benefits directly from the construction of a large Federal reclamation project, according to a recent tabulation of expenditures released by the United States Bureau of Reclamation for the Central Valley Project upon which disbursements are going forward at the rate of $44 a minute, all on a repayable basis.

John C. Page, Commissioner, Bureau of Reclamation, reported to Secretary of the Interior Harold L. Ickes, that 36 States have participated to date in furnishing materials and supplies, and seven of the top 10 on the list are east of the Mississippi River.

California, the home State, naturally has received the largest share of business, but Indiana is second, Michigan fourth and Ohio fifth. Others among the leaders are Oregon in third place, Colorado sixth, followed by Illinois, Alabama, Pennsylvania, District of Columbia, Washington, Wisconsin, New York, New Jersey and West Virginia.

Walker R. Young, supervising engineer of the Central Valley Project, said disbursements to the end of the 1939 fiscal year totaled $18,337,000. Most of this is in payments to contractors for work done on Shasta Dam north of Redding, the 30-mile railroad relocation around the Shasta Reservoir site, and the Contra Costa Canal in the vicinity of Antioch. Contracts have been awarded in excess of $60,000,000 calling for progress payments as the work advances.

Expenditures by the Bureau of Reclamation for project materials and supplies—such as structural and reinforcing steel, cement, sand and gravel, pipe, metalwork and machinery—to last July 1 aggregated $1,739,000, distributed among three-fourths of the States of the nation. For the first three states, California's share was $677,000 or about 39 per cent, Indiana's $408,000 or 24 per cent, and Oregon's $155,000 or 9 per cent.

Although heavy construction is just beginning, more than 3,000 persons now are engaged by the government and its contractors on various features of the Central Valley Project. The construction program soon is to be expanded to include Friant Dam, near Fresno, for which bids were opened in Sacramento on September 7.

Central Valley is a multiple-purpose project for navigation improvement, flood control, supplemental irrigation, salinity control and electric power generation. Like other Federal Reclamation projects, the Central Valley Project is being constructed as a self-liquidating project, power and water payments to reimburse the United States.

REDWOOD ASSOCIATION ELECTS NEW OFFICERS

Directors of the California Redwood Association have elected the following officers:

President, Leonard C. Hammond, president of the Hammond Redwood Company; vice-president, Edward L. Green, vice president in charge of sales of Union Lumber Company; manager, Selwyn J. Sharp, heretofore acting manager. J. W. Williams continues as secretary.

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RUNNING FIRE

(Continued from Page 1)

Indirection

Walking into the bar for an Old Fashioned I saw the little gentleman drinking a glass of beer and sporting a bandage on the top of his semi-bald head. When I took a place beside him he smiled genially and waved to the bartender, magnanimously holding up two fingers. This surprised me but I made the proper tokens of gratitude and asked him about the bandage on his head. He explained that he had over-imbibed the previous evening and that while exhorting a group of people to make him dictator, someone had hit him over the head.

"The fate of nations hangs by the thread of chance," he continued. "Many persons are endowed with certain abilities and foresight, but only a few of them ever have a chance to become heroes, dictators or generals. For instance, if one hundred men of equal intelligence, character and training form a nation, only one can be the leader. Though each wishes to be leader, luck will favor only one. It is therefore my claim that no one prominent individual of today is greater than all the other individuals of today. Luck and conditions have favored to make him prominent and by so doing have put the fate of nations in the balance."

"To illustrate further, Napoleon was great only because he was small—if he had not been small he would not have worked so hard to become great. If Alexander had not been born of royal family, he would not have inherited an army with which to conquer Asia. If Cleopatra had not been seductive, Mark Anthony wouldn't have risked an empire. Certain rulers such as Marcus Aurelius, Justinian, Frederick of Prussia and Mohammed had other qualifications than those for rulers; such as literary, legal, mechanical and illusory. It might be added that to become great, it is not necessary to be a dictator though I personally consider this the easiest way except for certain trials. Look at Marconi, Edison, Newton, Milton, Sappho, Plato and Herodotus. The fact that one is not a ruler, a dictator, a president, or a general is due entirely to a set of circumstances surrounding his birth, development, maturity and death; that is why I was hit over the head last night."

The little gentleman bowed me adieu, bumped his head on the bar rail and weaved out the door. The sheriff-running bartender, O'Brien, came and stood across from me with his palm held out. I paid for both drinks.

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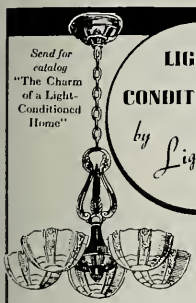

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ANNUAL BRIDGE COMPETITION

Students in engineering and architectural schools throughout the United States have been invited to participate in the annual bridge design competition for which the American Institute of Steel Construction is offering three cash prizes. The designs judged to be the first, second and third best will be awarded prizes of $200, $100 and $50 respectively. Certificates signed by a jury of award and by officers of the Institute will be awarded to the prize winners and to those whose designs are given honorable mention.

The Institute is announcing this competition coincident with the opening of the new school year in order to give all students an opportunity to participate in the competition. This will enable the schools to arrange for it to be included in their curricula, thus enabling the students to work on the project with an appropriate school credit for such work.

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Institute of Steel Construction, 101 Park Avenue, New York, N. Y., not later than February 5, 1940. The jury will meet on February 14 to make their judgment.

The subject of the competitive design is a steel foot bridge to carry pedestrian traffic across a parkway to a recreation area at one side of the parkway. The approaches may be either ramps, steps, or stairs. The other specifications of the bridge have been outlined in the notice of competition.

The students are cautioned to take notice that the supposed bridge is to be an efficient structure of good appearance, but they are to plan one for which no extra money is available for expensive decoration or masonry. It is suggested that they attempt to achieve good appearance by the proper use of form. The structure must be of steel, including the floor.

THE SUB-CONTRACTOR AND HIS RELATIONS

By ERIC GUYTON in California Plasterer

NO consideration of the construction industry, its wonderful record of achievement, or the merits or demerits of its loosely-jointed system of interlocking interests, can be complete or even truly made without full understanding of the part played by the specialty contractor, often alluded to as sub-contractor. It has been conservatively calculated that at least 70 per cent of the work upon an average construction project is cared for through the specialty contractors. It is certain that as a group, or rather as a series of groups, they represent by far the largest section of employers in the construction industry. It is through their payrolls and through their purchase of materials that a very large part of the costs of any building project are circulated among the employees engaged.

Each individual specialty contractor is faced with the problem of how best to fit himself into a place between the ceiling of a general contractor whose successful choice of the competitive bids from specialty contractors has secured him the award, and the floor of current costs of materials and of his necessary labor, to which is al-

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ways being added increasing taxation and liabilities. He must try to hold up the ceiling with one hand or both, while he presses down all he can upon a floor provided for him to stand on. In the meantime, from what may be termed his own level, his own real competition arises from among those only too anxious to beat him to the punch with a lesser figure on the job. For him, therefore, it is certainly a particularly tight spot. As though to aggravate his difficulties, yet another source of anxiety has been thrust upon him.

It must be remembered that as a class, the specialty contractors are, in the main, inarticulate. Their lack of permanent organizations, largely due to the hazards of their particular occupations resulting in impaired purchasing power among themselves, fluctuating incomes and too often poor returns from their best endeavors, place them in this way also at a great disadvantage. So hazardous is their calling that very few crafts have any treasure-chest and few individuals are able to acquire the necessary income to warrant permanent investment in properly organized protective groups. As one consequence, few are able through any organization to resist, promptly and successfully, any concerted attack made upon them, nor can they successfully appeal against legislative measures, however well intended, which often fail to deal justly and impartially with their interests. The professional classes, on the other hand, can and do see to it that their concerns are not adversely affected without the public being promptly made aware of it. The general contractors, as individuals, and as a group, are directly and indirectly on the alert constantly to maintain with government itself, as well as with the public, such relations as they see fit. The labor organizations so essential to the industry, through their affiliations, do the same. Not so, with but few exceptions, the specialty contractor. It is he who stands the gaff.

There is no solution of the industry's problems possible until one outstanding fact is kept constantly in mind. As at present constituted, every con-

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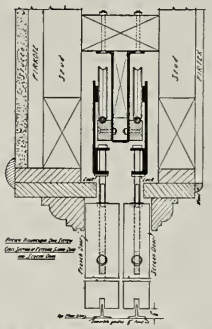

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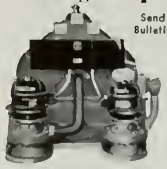

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tractor, general or specialty, acquires and retains his place in the picture by reason of his constant and unremitting vigilance to secure and hold every economic advantage in a highly competitive field. It is the element of competition which enters at every stage which gives the consumer public protection and assurance of reasonable costs. Suggestions directed towards the substitution of vertical setups for the horizontal ones with which the building industry, owing to its diversified needs, has been for so long familiar, require at this time and for this reason, very close watching indeed. Therein lie the larger dangers of monopolistic practices against which certain voices have been protesting as now current, but which would be certain to be conceived, nourished and kept dominant by a breakdown of the present competitive practices.

Dispassionate, impartial and reasonable inquiry let there be, it is at all times highly desirable. Narrow, prejudiced and ill-informed criticism will in the end defeat itself, but before that happens more than enough mischief may have been spread to lead to contraction of an already uncertain demand. Not until the entire picture and its component parts are properly appreciated can any real solution be achieved. It is in an endeavor to place the parts in a little better perspective that the above has been written.

BIDS FOR HUGE BRIDGE

Ten contracting firms bid for the construction of concrete piers and abutments of the world's highest double-deck bridge, a feature of the Central Valley Project.

The bids, ranging from $1,138,288 to $1,768,505, are for building four abutments and 10 piers of the Pit River Bridge which is to carry the relocated main line of the Southern Pacific railroad and four lanes of U. S. 99 highway traffic across an arm of the future Shasta Reservior, 14 miles north of Redding.

The proposals were taken under consideration by the United States Bureau of Reclamation which announced that bids for fabrication and

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erection of the steel superstructure will be called early this fall. The bridge will be a combination cantilever and truss structure two-thirds of a mile long.

Low bidder on the concrete substructure was the Union Paving Co., San Francisco, at $1,138,288. Second low was Hoafey-Moore Co. and Fredrickson & Watson Construction Co., Oakland, at $1,162,083. Third was MacDonald & Kahn Inc., San Francisco, at $1,306,103.

Walker R. Young, supervising engineer of the Central Valley Project, said that work on the bridge will start within 30 days after an official notice to proceed is given the firm awarded the contract. A contract award first must be approved by the Secretary of the Interior. The contractor will have 16½ months to complete the piers and abutments.

The government will furnish cement, sand and gravel for the manufacture of 95,000 cubic yards of concrete, and also 11,000,000 pounds of steel reinforcement bars that will go into the structure. The contractor is to furnish lumber for forms, construction equipment and labor. The job also will include 276,000 cubic yards of excavation and 380,000 cubic yards of backfill.

Mr. Young said that when complete the Pit River Bridge will be almost 500 feet above the present level of the Pit River. However, after Shasta Dam is completed by the Bureau of Reclamation in the Sacramento River Canyon about eight miles downstream from the bridge, water eventually will back up in the tributary Pit River Canyon to within 35 feet of the lower deck of the bridge.

The tallest pier will be 358 feet high and 95 by 90 feet in size at the base. Another pier will be 356 feet high and 95 feet square at the base, and a third 271 feet high and 72 by 58 feet at the base. The concrete in these three largest piers will be artificially cooled by the circulation of river water through metal tubing embedded in the structures, a practice developed by the Bureau of Reclamation and heretofore used only in the construction of giant dams.

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The four abutments include two for the railroad, which is to occupy the lower deck, and two for the highway which will have curbed approaches leading to the upper deck. The main abutment at the southerly end of the bridge will be monolithic with the north portal of a half-mile railroad tunnel through Bass Hill. The tunnel, one of 12 on the 30-mile railroad relocation now under construction between Redding and Delta Station, was holed through two weeks ago.

NEW BOOKS

IRON BREW, by Stewart H. Holbrook —Macmillan Company, New York —Price $2.50.

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STEAM AND HOT WATER FITTING, By William Walters—American Technical Society, Chicago, Ill.—Price $2.00.

Another of the excellent manuals published by the American Technical Society whose books are greatly in demand for their technical completeness and attention to detail. This particular volume should be useful to the plumbing contractor and to the heating and ventilating engineer. A wealth of technical material set down in an understandable manner with sufficient illustration to clarify points in question.

THE GARDEN IN COLOR, By Louise Beebe Wilder—Macmillan Company, New York City, N. Y.—Price $2.95.

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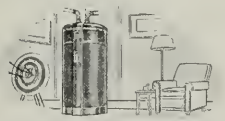

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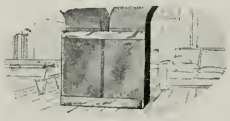

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Detection

About five I went down to the bar for my drink, and had just had it placed before me when I saw the Little Man skulk through the door. He stopped a second, turned, and eyed the street, careful not to show more than the uper half of his bald head to an outsider.

Seeing that he wusn't followed, he walked over to the bar and gulped my drink. Apologizing profusely, he explained that he was very upset about a little matter. To show him I bore no grudge, I ordered two drinks.

"It is odd," the Little Man continued, "what constitutes a crime or a criminal activity. All my life I have tried to nonchalantly jaywalk or go against the signal. Every time I do I have to run and hide, even though the penalty will probably be no more than a toot on a whistle, a few rough words, or mere embarrassment. Many people can traverse a crossing in antagonism with legal restrictions and feel a definite pride in so-doing. The psychological impulses that constitute man's nature are such that he builds up within himself a code of ethics, religion and activity. For me to jay-walk is a crime, for you to jay-walk may be fun; for me to rob is a crime, for Dillinger it was work. However, a further classification becomes necessary, that of the person who commits no crime because he is afraid. I might swindle (he looked embarrassed at this point) but I would not do it if I felt that I would be turned over to a big policeman with a bright badge.

"Therefore, crime may be laid to the following reasonings: the desire for something overcoming the fear of reprisal for obtaining that something, man's code of ethics or his social impulses prevailing upon him to act in a certain manner, and the desire to do something to fool the forces of law and order. These will be found to be the bases for all crimes, petty or great, and as such should be aims of educators, writers, and social workers."

"By the way," he added, "the next two are on me." When I had finished my drink he had disappeared.

* * *

Chinatown

During many visits into San Francisco's picturesque Chinatown I have encountered numerous interesting and strange facts. Among these are the only English printed Chinese newspaper, edited by Chingwah Lee, unfathomable and intricate puzzles, the habit of working at night and sleeping in the day, and others.

A by-line on the Chinese is their tendency to use American slang. In a beautifully elocuted and worded sentence will be injected some trite phrase from the lower east side. At a luncheon a well respected Chinese, in truth a linguist, turned to me and remarked, "We must remember, in any undertaking of this character, not to chew off more than we can bite."

Latest is the recently opened Cathay House. The interior is well designed, but most striking are the murals done in black and gold, illustrations of typical Chinese designs and art work. In talking to Dr. Ted Lee, one of the owners, and John Cann, manager, I asked about the artist who had made the murals, whether he had come especially from China to do the work or if they had been able to find someone sufficiently gifted among the Chinese residents in San Francisco.

"No," Dr. Lee explained, "the artist is an American. We had some trouble getting him to follow Chinese line work and symbolism, but after a study he proved excellent."

"An American artist on Chinese design," I muttered. "What's his name?"

"Don Clever," Dr. Lee answered.

Darn clever, these Chinese.

Filing Cases

Every neat and orderly business man should have a filing tray on his desk. I have one. In it I toss all papers, pamphlets and documents that, by any remote chance, might ever be of interest. The problem of deciding where and how to file them is left to my secretary. That is one of her duties, of course. Nevertheless, despite her efficiency, which may be more or less patterned after my own, the papers and pamphlets accumulate until the stack threatens to topple to the floor. At this juncture, with controlled indignation, I take a hand.

It was this emergency that started a sort of semi-annual combing of the tray a few days ago. Why couldn't that secretary file things where they belonged? Well, first there was a luridly colored booklet entitled "Personal Notes." It contained my own observations, none of which I could remember, so I read them and filed the booklet in the overflow, a drawer in my desk. Next was a letter from Kenneth Reid, Editor of "Pencil Points," dated 1934. Then in rapid succession, my World War discharge papers, a note to call EX 1511, an unknown photograph, a pamphlet urging me to vote for President Roosevelt (which one I don't know). I filed the picture in the center drawer and jammed the rest in the upper left.

Then I found a note from Prince Charles of Belgium. I tore off the stamp and stuffed the note in my pocket. I scribbled poem:

"I saw a man upon the stair.

I looked again, he wasn't there.

He wasn't there again today

Oh, how I wish he'd go away!"

which went in with "Personal Notes."

At the bottom of the stack was an advertisement for filing cabinets, showing the neat looking drawers and explaining the ease of finding items on a moment's notice. I filed this in the waste-paper basket.

Now I am looking for a desk with accordion drawers.

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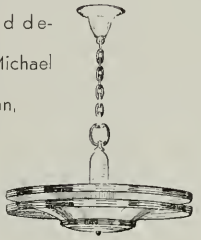

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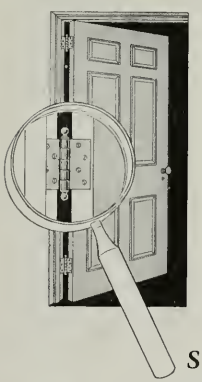

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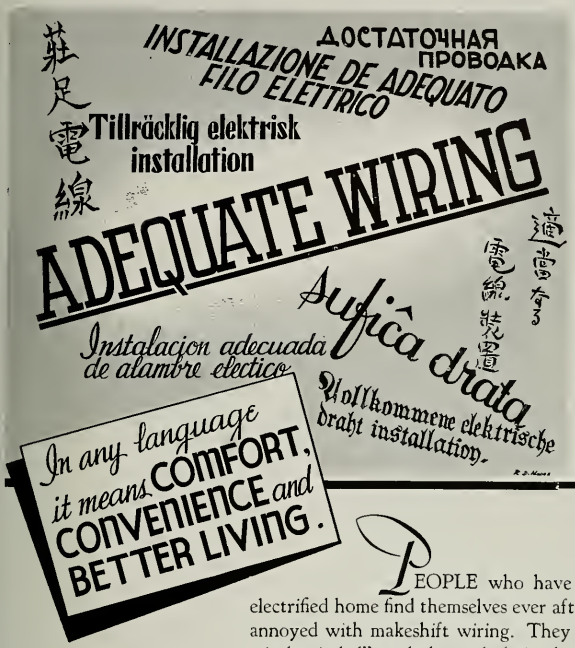

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MURAL CONCEPTUALISM

"Mural Conceptualism," a show of unusual interest that features a close interrelationship between modern art and architecture, opened at the San Francisco Museum of Art with a preview on Tuesday night, November 7.

A swimming pool, a yacht club, a parking lot, and a streamlined merry-go-round are among the architectural models on display. They are created by such well-known architects as Ken Webber, Richard Neutra, Gardiner Dailey, Frank Lloyd Wright and Michael Goodman.

Leading bay region artists, as well as members of the American Abstract Artist Group of New York, have contributed paintings that are in perfect synchronization with the mood expressed in the architectural models. These paintings are all done in materials other than canvas, including cork, glass, metal, wood, concrete, and even fur. Among the artists represented are Florence Swift, Margaret Bruton, Florence Tufts, Beckford Young, Margaret Peterson, and John Ferren.

The movement of the Conceptualists originated in the bay region about two years ago. Meanwhile, it has found wide recognition all over the country. It is a new and highly original venture of cooperation between artists and architects, aiming at an undisturbed unity between architectural and artistic forms.

The exhibit will be on view at the museum at the Civic Center through December 7. The museum galleries are open to the public daily from noon to ten in the evening on weekdays and from one to five in the afternoon on Sundays.

OTHER ART SHOWS

Mills College Art Gallery, Mills College, Oakland, to November 29, Exhibition of Abstract Art. (Gallery open to the public without charge, Sundays, Wednesdays and Fridays from 2 to 5 o'clock).

Oakland Art Gallery, Municipal Auditorium, Oakland, to December 10, Annual Exhibition of the Bay Region Art Association.

San Francisco Museum of Art, War Memorial, Civic Center. Through November 19, San Francisco Art Association Annual Exhibition of Drawings and Prints; to December 3, Fourteenth Annual Exhibition of the San Francisco Society of Women Artists; November 21-December 10, Paintings by Geneve Rixford Sargent.

ADDITION TO SAN FRANCISCO SCHOOL

An auditorium and cafeteria for which there is available approximately $100,000 is to be built at the Francis Scott Key School, San Francisco, from drawings by William Mooser, Edward A. Eames and Douglas D. Stone. Bids for the work are now being taken.

RESTAURANT BUILDING

Contracts have been awarded by Albert R. Williams, architect, for a $30,000 restaurant building for the Bunny Waffle Shop at 964 Market Street, San Francisco.

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A. I. A. CONVENTION MERRY-GO-ROUND

One of the measuring sticks of architectural education, the list of accredited schools, has become so obsolete that the Association of Collegiate Schools of Architecture has set about to prepare a new accredited list. This action brought two questions before the recent Institute Convention, both of which could be given much consideration: (1) Is accrediting a good thing? (2) If so, how can accrediting best be accomplished?

* * *

The Institute was urged to continue its wholehearted support of the National Council of Architectural Registration Boards and of the Mentor System, which was defined as "doing what architects have always done; taking young men and advising them and helping them to become our competitors."

* * *

Registration laws were passed during the year by Arkansas and Alaska and seven of the eight states still without such laws are attempting to pass them.

William Stanley Parker, for the Committee on Housing, brought out several pertinent thoughts. Since the problem of really low-cost housing has not yet been solved, the adoption of rigid types and set precepts in housing was condemned as restricting further original thought in a field where advantage must be taken of every opportunity to reduce cost.

* * *

High costs of housing material and labor reared their ugly heads again and found many on the convention floor to do battle against them. There is strong individual feeling on the subject of building costs and the underlying reasons for them, but only great wisdom, tact, and fearless concerted action will provide a remedy. The matter of labor relations was considered of sufficient importance to place in the hands of a separate committee and it was suggested that it be made the theme of the next convention.

* * *

It was gratifying to hear that definite steps have been taken by the profession and government agencies to put small house and remodeling work in the hands of architects. Max Dunning told of the Federal Home Building Service Plan which has offered in behalf of some 375 independent architects a modified architectural service available at a fee commensurate with the means of home buyers of small and moderate incomes. Reduced fees are made practical by the repeated use of the same plans; there is absolute insistence on architectural supervision where such is available.

* * *

The Convention was also appraised of the fact that the HOLC has been engaging independent architects to supervise all but the smallest of its repair and modernization jobs. These small items add up to an impressive total when it is considered that most of the 140,000 homes acquired in the last three years have had to be reconditioned, repaired, or modernized.

This year the report of the Executive Board was almost devoid of resolutions and any controversial matter. The reading of this report was probably necessary, since it was handed out in printed form. The monotony was broken by the inimitable wit of President Maginnis and the spontaneous outburst of Mr. Lecaze who called the whole procedure "ghastly."

* * *

The two outstanding sessions were those in which were presented the report of the Committee on Federal Public Works and the evening session devoted to Education.

* * *

Various bills introduced in Congress during the past session indicate a growing appreciation of the value of the services of the architects engaged in private practice. On the other hand, a warning was given of the increased activity of state and municipal architectural bureaus and the general trend towards bureaucratic practice of architecture in the larger centers of population. So far there is little evidence of concerted effort to counteract these tendencies. More active participation in civic life was suggested as the one hope of the architect if he wishes to have sufficient influence to keep this work in private practice.

* * *

Mention was made of the danger of government withdrawal of regional competitions for public buildings if architects do not show more interest. Analysis showed that the inducement to enter such competitions is not as great as it might be. To make them more attractive to members of the profession, two proposals were made. The first was that the chosen architects be allowed more authority in the preparation of final drawings and in supervision of construction. The second was that others than the one prize winner be put on a preferred list or given a chance for obtaining commissions on work of a similar nature.

* * *

John H. Carmody, the new administrator of the Federal Works Agency, present to hear the Federal Public Works Committee's report, made a short but impassioned plea for the help of the architects in eliminating the inefficiencies and incongruities of the construction industry and in the reduction of building costs.

* * *

To the Pacific Coast delegation, the work of the Committee on Education seemed very significant and when its chairman, Mr. Zantzinger, announced the retirement of its "hard-drinkinng, poker-playing, evil old men," it was taken with genuine regret.

PRACTICAL HIGHWAY LANDSCAPING IN CALIFORNIA

By H. Dana Bowers

(Concluded from October Architect & Engineer)

CALIFORNIA'S varied topographical and climatic conditions make the problem of roadside landscaping rather unique. With the exception of harmonious location and grading, which is always appropriate, the various regions—coastal, valley, mountain and desert—should receive individual methods of landscape treatment.

The humidity of the coastal region allows for a more liberal interpretation of roadside improvement particularly in the use of plant materials. Seasonal rainfall is not always a controlling factor as regards the use of plants, as is exemplified by comparing the valley and coastal regions. Although the rainfall may be comparable, the existence of atmospheric moisture completely changes growing conditions. Thus in the coastal region there lies the possibility of a comprehensive landscape treatment involving all of the basic landscape requirements as set forth by the Bureau of Public Roads. These are:

I. Landscape Grading (flattening, rounding transition slopes, etc.).

II. Obliteration of old roads, resoiling borrow pits, etc.

III. Topsoiling, improving of existing soils and soil preparation necessary for seeding or planting.

IV. Planting of trees, shrubs as permitted by local soil, slope and climatic conditions.

V. Seeding or planting of grasses, succulents or other ground covers.

VI. Provision for properly designed rest areas or scenic turnouts.

Projects submitted for landscape credit must include these six basic stages of landscape work or the omission of any of them must be explained.

One of these requirements without at least a majority of the others will not qualify for Federal landscape participation.

Even casual study will reveal the impracticability of formulating a definite set of rules to cover such a wide range of conditions as are encountered in California.

The coastal region, where such a standard may be conformed with, comprises only a small percentage of the State's area, while the majority of the State—valleys, mountains and desert—presents conditional problems that set a definite limitation on landscape treatment.

In order to carry on a practical and perpetual program of roadside improvement it appears only reasonable that this fact be recognized and a more flexible translation of comprehensive projects be made. Generally speaking, landscaping in the valley region is necessarily confined to tree planting and the flattening of roadside ditches. (Treatment of structures and possibly town entrances are excepted.) Tree planting must be programmed three to five

(Turn to Page 10)

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A GARDEN TO LIVE IN

By BERNIECE ASHDOWN

Landscape Architect

EUROPEAN visitors invariably express astonishment at American extravagance. While their conservative natures rebel against all forms of our lack of conservation, they are most offended by our wholesale waste of land.

We may indeed be happy that the strict economy of land as it is practiced in Europe is not necessary here. However, perhaps we could all profit by exercising more caution upon the problem of developing the yards around our homes with an eye to conservation.

Careless planning and planting not only usurp the beauty and usefulness of the garden but add to the cost and labor of maintenance.

The first step in any garden is the plan. Many gardens would be lovelier if more time was spent planning details and less money expended for planting areas already overcrowded.

The plans should be designed to conserve space, create as much beauty as possible and at the same time furnish the utmost in convenience and utility.

Each garden should be planned for the use of the people who are to live in it. No two gardens ever have exactly the same setting or function and therefore should not be made according to the same plan.

In laying out a garden, note should be taken of what it is desirable to include and then each feature should be worked in to the best advantage.

Not only should the various units of the garden be grouped harmoniously but they should be made to blend with the surroundings. Gardens should provide enough privacy to allow their owners to relax and if they wish, to enjoy an out-of-door meal without being spectacles for public gaze.

Family hobbies and sports should be given special consideration. If there are children, the garden should provide a place for their entertainment, with special features depending upon their age and interests.

Space for many games may be provided easily, even in comparatively small gardens. I know a family which has designated a corner of the lawn as a putting green, where the man of the house spends spare moments developing his golf technique. Modern equipment for such games as croquet and badminton, may be set up and removed with minimum trouble. Tables for games are easily moved about. It is best to confine tennis to courts situated where they can be enclosed conveniently by a high wire fence.

Swimming pools should not be limited to the estates of the wealthy, on the contrary, many small gardens have swimming pools which may be constructed at very nominal expense.

Barbecue pits have enjoyed widespread popularity in the last few years—and justly. Barbecued foods are not only appetizing but easy to prepare as well. They make entertaining easier and add an inexpensive note of luxury to the every day family life.

Terraces are each year becoming more popular. They are especially useful in back yards. When correctly built and paved with brick or flagstone, they are easily and inexpensively maintained. Because they dry off quickly, even in wet weather, they have a longer period of usefulness than lawns. Terraces should not, however, replace lawn when a cool green foundation is essential to the beauty of the rest of the garden.

A few well chosen pieces of garden furniture are imperative to a garden's usefulness. These should be simple in design, durable and comfortable. They should be placed, whenever possible, in locations which provide some shelter and command a pleasant view of the garden.

Floodlights, judicially located, add countless hours to the usefulness of the garden. The light should never be so strong that its effect is harsh, but should be bright enough to insure comfort in moving about.

The garden should contain no fussy flower beds, which make circulation difficult and are a trial to maintain. Trees should be located where they give desirable shade without blocking a vista or keeping light out of the house.

Water adds immeasurably to the esthetic value of the garden. It may be in the form of a small stream, a well placed bird bath, a fountain, or a small pool. Care should be given to producing a natural appearance. The water level in informal pools should never be higher than the surface of the ground. Water falls should never be built in mid-air. The effect is always artificial and displeasing.

When planting the flower borders, the tallest growing plants should be planted in the background and the shorter ones in front. The colors of the flowers should harmonize. In order to provide continuous bloom throughout the season, plants should be chosen which will bloom successively.

It should be remembered that no garden "just grows," but requires regular and careful attention. Irrigation should be arranged according to the climatic requirements. Cultivating should be done often enough to prevent the ground from becoming caked and hard. Weeds should be conscientiously removed before they become large enough to choke out the flowers.

Autumn is the best time to make garden plans and adjustments for the new year.

HIGHWAY LANDSCAPING

(Continued from Page 8)

years apart in order to keep within a reasonable and nonfluctuating maintenance setup. Valley projects then must necessarily be few and far between.

The mountain regions offer opportunities that are perhaps of more esthetic and economic value than does the coastal. Although landscape features here are limited to grading, scenic turnouts, parking areas, topsoiling or general clean-up, any one or all combined definitely stand out as an improvement in roadside appearance.

To stipulate that all of these features shall be included in order to formulate a comprehensive plan is not always practical, since in many sections, such as the semi-arid foothills, clean-up of the right of way or the development of water and parking space might have a great esthetic value and render a useful public service.

In the higher altitudes more heavily covered with natural growth the intelligent use of top-soil on fills and flattened low cuts would bring about a rapid natural effect. Of course, there are usually additional opportunities to provide other types of landscape treatment, but the point in mind is this—that even one basic landscape requirement is often highly desirable and worthy of application.

Landscaping in the desert is obviously limited to harmonious grading and top soiling—perhaps top sanding would be more nearly correct. There is, in certain desert sections, opportunity to conserve or impart the "seed coat," where natural desert flowers are known to be present, for a light covering over the slopes.

Cultivation of the area outside the shoulder will change growing conditions to the extent that the results will be surprising. The moisture retained under the pavement will give new life and appearance to desert roadside growth.

Contrary to popular belief, highway landscaping is not entirely a palliative or a follow-up embellishment of construction. Although the process nearly always involves in some way the use of plant material, it should be regarded and practiced less from the standpoint of artificial endeavor, and more from the practical and economical process of a natural restoration treatment to insure roadway permanence which automatically will improve roadside appearance.

There has been but little of this procedure in the past, due, as before mentioned, to inexperience. Mistakes have been made as is the case in any new line of endeavor that launches out on a large program too hurriedly. However, having profited by past experience we should now continue on a more practical basis.

Under way at present in San Luis Obispo County, between Pismo Beach and Arroyo Grande, is a day labor landscape project where the principles set forth in this article are being applied.

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The receptor (base of cabinet) has chromium plated brass waist and filled base frame . . . is available in all sizes and colors, as are the finished cabinets of porcelain, metal and glass.

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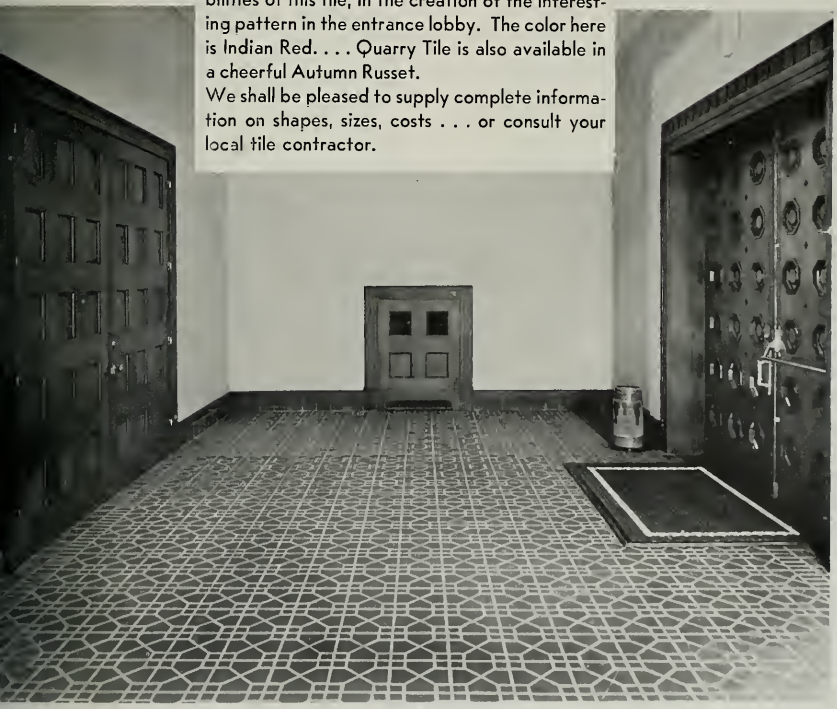

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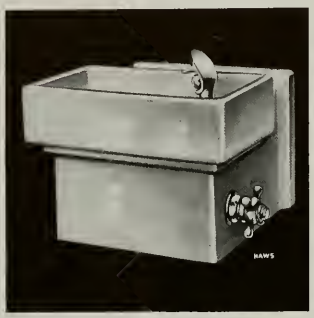

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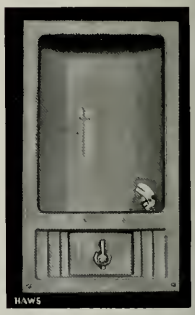

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Concrete masonry home of W. F. Prisk, Palm Springs, Calif. Charles O. Matcham, architect (Office of Earl Heitschmidt, Chas. O. Matcham & Paul O. Davis, architects). W. R. Atkin, contractor.

Reinforced concrete masonry home in Beverly Hills, Calif. Precast joist floor construction and cement shingles add to the fire safety of this home.

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(Below) Reinforced concrete home in Toluca Village near Los Angeles. Arlos R. Sedgley, architect. J. M. Todd, concrete contractor.

(Above) Reinforced concrete home of Mr. and Mrs. E. A. Utahs, Inglewood, Calif. Edith Northman, architect. J. M. Todd, concrete contractor.

DETAIL OF LIVING ROOM, HOUSE FOR DR. AND MRS. HAROLD CARTER, BERKELEY, CALIFORNIA
MICHAEL GOODMAN, ARCHITECT

HOUSE FOR MR. AND MRS. TRAVERSE CLEMENT, LOS GATOS, CALIFORNIA

A TRIBUTE TO THE WORK OF MICHAEL GOODMAN, ARCHITECT

By WILLIAM C. HAYS, F.A.I.A.

AMONG architects, the name of Michael Goodman becomes increasingly well known. With it we associate a series of highly original buildings, each embodying investigation into, and intelligent employment of "new" materials which he combines so skillfully with the old, familiar types. In Mr. Goodman's make-up one finds unusual combinations of qualities: the analytic habit coupled with an intuitive good taste; respect for the Past not lessened by his interpretations of the Present for the Future.

Mr. Goodman is an embodiment of the idea that architecture is achieved only through cooperative effort. He is the inspirer of a group of young men who, fewer in number and without the publicizing of a Talliesen, aid in producing designs and buildings of exceptional distinction. Some of the works are gathered here. The leader, himself, is indefatigable and no building of his is ever stereotyped or commonplace. Clearly, every client offers him the challenge of a really fresh problem, to be individually solved and given a "personality" of its own.

It is natural that Mr. Goodman's works should be solicited for publication, both locally and abroad: significant that they have appeared, frequently, in the International Studio's Decorative Arts (London) and in French Publications.

Now in his middle thirties, Mr. Goodman is Russian born; lived in Harbin, China, during the Russian Revolution; has traveled extensively but has made his home in Berkeley since 1921. A graduate of the University of California, he is an inspiring member of its teaching staff. In the world of Graphic Arts he is equally well known; has won medals, awards and other recognitions, including membership in important art associations.

HOUSE FOR DR. AND MRS. HAROLD CARTER, BERKELEY

DETAIL OF LIVING ROOM AND DINING SPACE

EXTERIOR VIEW

Above—Plot Plan

Below—Second, First Floor and Basement Plans

SIDE VIEW

HOUSE FOR DR. AND MRS. H. E. CARTER, BERKELEY

DINING SPACE

ENTRANCE END OF LIVING ROOM AND BALCONY

CONSTRUCTION OUTLINE

House for Dr. and Mrs. Harold E. Carter, Berkeley

FOUNDATIONS: Reinforced concrete.
FRAMING: Oregon Pine framing lumber, redwood mud sills.
EXTERIOR WALL FINISH: Redwood, waterproofed, plywood siding, oiled.
ROOF FINISH: Built up tar and gravel.
WINDOWS: Steel casement.
FLOOR FINISH: Living and Dining rooms, edge grain plywood; Hall and Bed rooms,, white oak; Kitchen and Bath, linoleum.
WALL FINISH: Living room, Study, Bedrooms and Dressing room, white pine plywood, stained; Dining room, redwood plywood, oiled and waxed; Kitchen and Bath, waterproof plywood, painted.
CEILING FINISH: Living room, open beam, redwood and pine members, oiled; Dining room, redwood plywood, oiled; Bedrooms, Study and Dressing rooms, white pine plywood, stained; Kitchen and Bath, waterproof plywood, painted.
WOODWORK: Trim, redwood and white pine, oiled or stained.
EQUIPMENT: G. E. refrigerator and Spark stove.

HOUSE FOR MRS. ESTHER CARR THATCHER, CARMEL

"—THE MASON USES MORTAR TO KEEP THE BRICKS APART—"

MR. GOODMAN ANSWERS SOME PERTINENT QUESTIONS

THE Editor looked puzzled. He had just read the opening lines of a promised article by me. "Doesn't this quotation (see heading) give a new slant on the subject of architecture?" he queried.

"It seems definitely so to me," I said, having confessed previously of my reluctance to write something "original" for lack of recent interesting books published on the subject of architecture.

* * * *

While looking around for some topic for discussion, we vaguely got on the subject of why buildings on photographs look as alluring and romantic as towns in travelogues; and that in these troubled days it may be interesting to look back upon the times when architects and artists belonged to a sort of a vertical C.I.O. union with the wool-dyers having the main say. The problems of the students and apprentices were looming as large and vexing as they are at present.

What always impressed me was the interrelation of office practice and schooling activity to an extent much greater than the professionals suspect. Every issue nowadays is entangled in highly controversial intricacies, and that to argue this point some final judgments will have to be suspended; even tentative theories held subject to change.

It is unfortunate that the outside world offers so many problems, so much excitement and invitations to enthusiasm and so many disturbing uncertainties; that in criticisms heaped upon the teaching of architecture the chief argument is the demand that teaching should be made as compact as an artichoke and streamlined to achieve some remote ideal based on passing vogues of the day.

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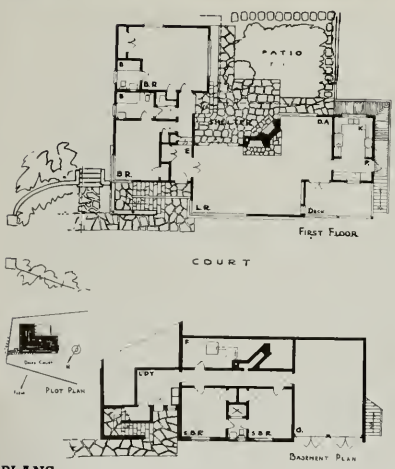
HOUSE FOR ESTER CARR THATCHER, CARMEL

PATIO



PLANS

DETAIL

OUTDOOR FIREPLACE

UTDOOR LIVING SPACE

LIVING ROOM AND DINING ALCOVE

HOUSE FOR MR. AND MRS. T. CLEMENT. LOS GATOS

VIEW FROM PATIO

CONSTRUCTION OUTLINE

FOUNDATION WALLS: Continuous reinforced concrete.

FRAMING: Oregon pine framing lumber and California redwood mudsills.

EXTERIOR WALL FINISH: Redwood boards and battens. Base of redwood bevel siding.

ROOF FINISH: Built-up Pabco roof.

INSULATION: None.

WINDOWS: Steel casement sash.

FLOOR FINISH: Plank oak floor in Living room; Oregon pine in Bedrooms; linoleum in Baths and Kitchen; brick floor in Living room alcove.

WALL FINISH: All rooms plaster; Bedroom and Den painted redwood rustic.

CEILING FINISH: Plaster and Celotex.

WOODWORK: White pine trim; flush panel doors; redwood rustic garage door.

LIGHTING: Ceiling light boxes with flashed opal glass.

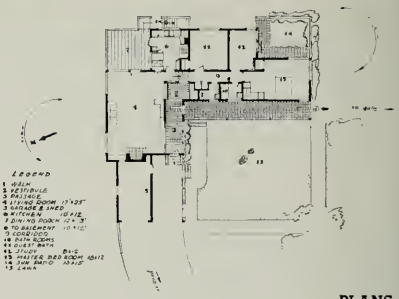
HEATING: Gas fired warm air heating system.

BUILT-IN AND SPECIAL EQUIPMENT: Fireplace casework, built-in divan and book shelves in Living room.

FEATURES: Outdoor alcove in Living room; raised patio off Bedroom; Paramount built-in fixtures.

EXTERIOR COLOR SCHEME: Roof, walls and trim white; blinds green.

CUBAGE: 22,555 cubic feet.



PLANS

It has been pointed out by Dr. Flexner that the difficulty is to find the proper system of canalization for the efforts of the student to give the answer to the ever changing requirements of outdoor life. Some complain that boys out of school cannot plan houses (or group housing). Others complain that the boys do not know how to design a post office. Engineers have their complaints, and commercial artists crab that art students have not learned how to stretch a piece of paper, etc. Anxious people ask why do some architectural schools base their system on the "five styles." That

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ETAIL OF LIVING ROOM

ED ROOM

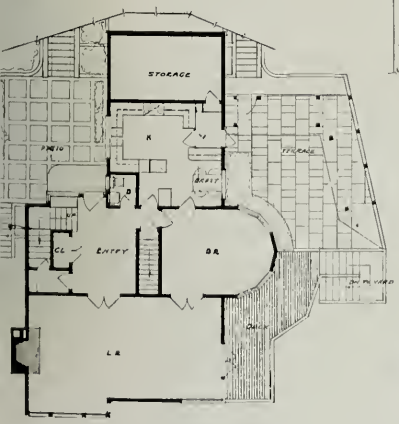
HOUSE FOR MR. AND MRS. FRANKLIN BANKER

TERRACE VIEW

STREET VIEW

ETAIL OF TERRACE AND DECK

LANS



DETAILS OF CRIB FLOWER BOXES—BANKER HOUSE

CONSTRUCTION OUTLINE

House for Mr. and Mrs. Franklin Banker, Piedmont

FOUNDATIONS: Reinforced concrete.

FRAMING: Oregon pine framing lumber, redwood mudsills.

EXTERIOR WALL FINISH: Redwood rustic, run to pattern, painted. Base colored stucco.

ROOF FINISH: Cedar shingles.

WINDOWS: Steel casement.

FLOOR FINISH: Living room, carpet; Dining and Bed rooms, Halls, white oak; Entry Parquet, Kitchen, Porch and Breakfast room, linoleum; Baths, tile.

WALL FINISH: Entry, run pine, stained; Study, run white pine, oiled and waxed; Dining room, grass cloth; Kitchen, painted canvas; Baths, tile and painted canvas; all other rooms painted plaster.

CEILING FINISH: Living room pine painted, Kitchen and Baths, painted canvas. All other rooms painted plaster.

WOODWORK: White pine trim, painted. Flush panel doors.

HEATING: Forced warm air, gas fired.

CHIMNEY: Common brick.

FEATURES: Paramount built-in fixtures; G. E. equipment throughout.

TCHEN, LOOKING TOWARD PORCH AND ALCOVE

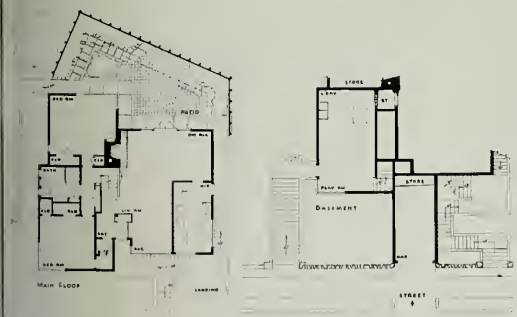
MASTER
BEDROOM

HOUSE FOR MR. AND MRS. FRANK BLUMBERG, BERKELEY

HILLSIDE APPROACH FROM STREET

Photo by Hildebrand

ANORAMIC VIEW OF LIVING ROOM, STAIR AND ENTRY



PLANS

ONSTRUCTION OUTLINE

House for Mr. and Mrs. Frank Blumberg, Berkeley

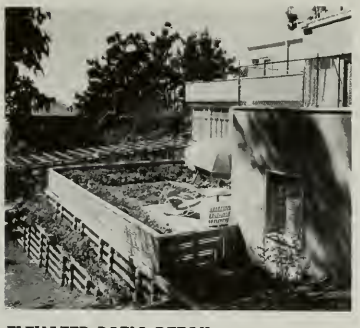
UNDATION WALLS: Reinforced continu- concrete.
AMING: Oregon pine framing lumber, lwood mudsills.
TERIOR WALL FINISH: Colored Californ- stucco.
OF: Built-up 4-ply tar and gravel.
OOR FINISH: Entry, Living Room, Alcove d Dining alcove, carpet; Kitchen and Bath, oleum; remaining rooms, white oak.
ALL FINISH: Entry, parts of Alcove and ir wall "Duali," natural finish; Living room, ove and Dining alcove, painted plaster; Kitchen and Bath, painted canvas; Master Bed room, wall peper; other rooms colored sand finish plaster.
CEILING FINISH: Entry, Living room, Alcove, Dining alcove, painted plaster; Kitchen and Bath, painted canvas; other rooms colored sand finish plaster.
WINDOWS: Steel casement.
WOODWORK: Entry, parts of Alcove, Stair hall, "Duali," natural finish; other woodwork, white pine, painted.
HEATING: Warm air gas fired heating; G. E. air conditioning.
PLUMBING: Fixtures, white.
FEATURES: Enclosed Patio off Living room, brick paving, wall C.P.C. units on Patio side, lean-to roof, redwood ptd. on steel supporting members.

SHOWER—Walls of Structural Blue Glas

Cabinet by Stainless Metal Products

HOUSE FOR DR. E. LOEB. BERKELEY, CALIFORNIA

WEST VIEW



ELEVATED PATIO DETAIL

PLANS

CONSTRUCTION OUTLINE

FOUNDATIONS: Reinforced concrete.

FRAMING: Oregon pine framing lumber, redwood mudsills.

EXTERIOR WALL FINISH: Colored stucco.

ROOF: Built-up tar and gravel.

WINDOWS: Steel casement.

FLOOR FINISH: Kitchen, Pantry and Laundry, linoleum; Baths, tile; Entry, parquet; all other rooms, white oak.

WALL FINISH: Entry, matched gum; Kitchen and Pantry, painted canvas; Baths, tile and painted canvas; all other rooms, colored plaster.

CEILING FINISH: Kitchen, Pantry and Baths, painted canvas; all other rooms, colored plaster.

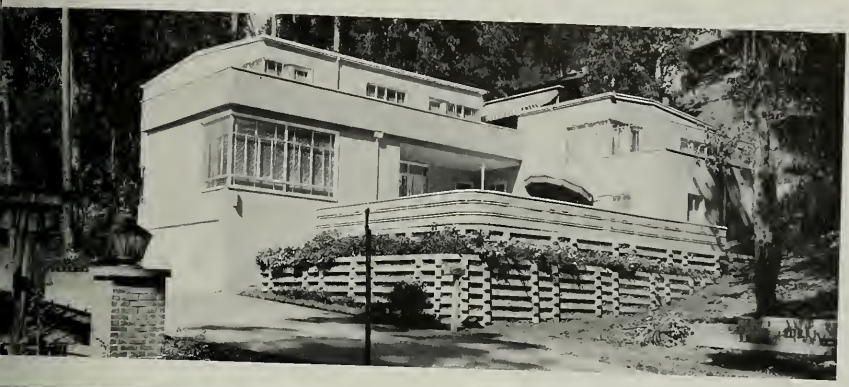
WOODWORK: Oregon pine trim pain flush panel doors.

LIGHTING: Ceiling light boxes with flas opal glass.

HEATING: Forced warm air, gas fired tem. Air conditioning and all utilities General Electric.

CHIMNEY: Common brick, marble f. damper.

FEATURES: All tile work by Gladding, Bean; Paramount built-in fixtures.



HOUSE FOR DR. E. LOEB

TOP—SOUTH VIEW

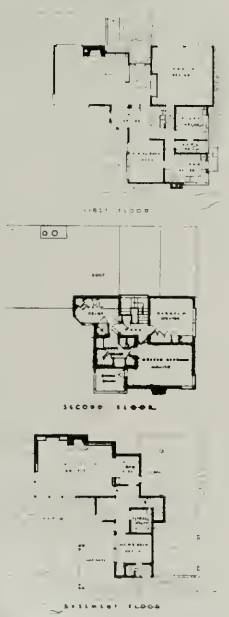
BELOW—LIVING ROOM

RIGHT—KITCHEN

BELOW—BRIDGE ALCOVE
OF LIVING ROOM

HOUSE FOR MR. AND MRS. JOS. HENRY JACKSON, BERKELEY

GENERAL VIEW AND PLOT PLAN



PLANS

UPPER RIGHT—PORCH

BELOW—STAIR HALL

KITCHEN

LIVING
ROOM
AND
ENTRY

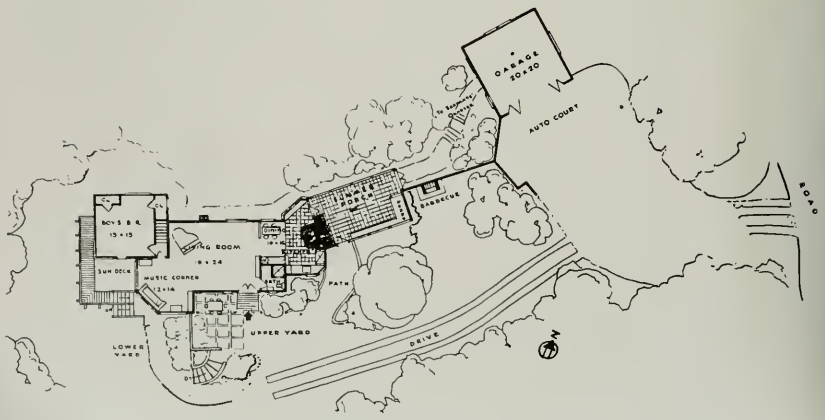
HOUSE FOR ARTUR ARGIEWICZ, MILL VALLEY

WEST ELEVATION AND SUN DECK

Photos by Esther Born

DRIVE COURT AND HOUSE

PLANS AT LEFT SHOW HOUSE BEFORE ALTERATION BELOW—PLAN OF HOUSE AFTER ALTERATION

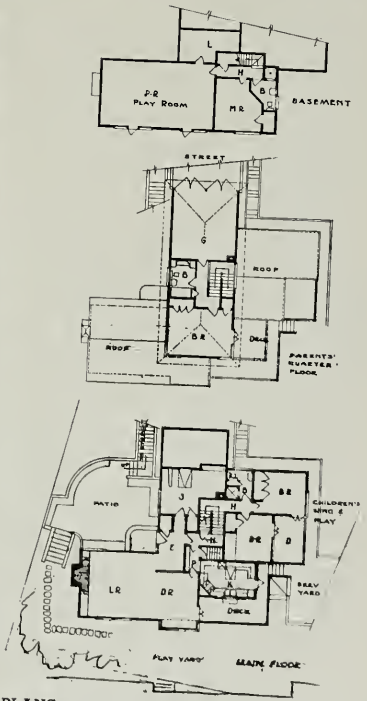


HOUSE FOR DR. AND MRS. JAS. GRAESER, OAKLAND

GARDEN VIEW

Photos by Esther Born

NTRY DETAIL



PLANS

HOUSE FOR DR. AND MRS. JAS. GRAESER, OAKLAND

ENTRANCE DETAIL

ENTRY AND DINING ALCOVE

EXHIBITS IN SCIENCE, UNIVERSITY OF CALIFORNIA
MICHAEL GOODMAN, ARCHITECT
Dr. A. McMahon, Dr. J. Pearson and Dr. L. Delssasso, Consultants, and Executive Staff

Photo by Esther Born

PALEONTOLOGY BOOTH

OCEANOGRAPHY BOOTH

INTERVIEW WITH MICHAEL GOODMAN

(Continued from Page 24)

the classic, for instance, is by accepted definition, a style that nobody uses. The very word is unpleasant, suggesting drudgery and dust. Something that could be left to the professors, who, incidentally, do not use them. After all, one can argue, that all aesthetics are incomplete and in the final analysis become useless. However, we can gain something from them by way of stimulus.

There seems to be a condemnation of "intellectual sterility" of the schools of architecture, with a hopeful look at the haphazard systems of some European schools for guidance. One should realize that the rise of architectural schools in this country is as amazing a phenomenon as the skyscraper or as the little theater movement; all of which originated in answer to certain compelling requirements.

Frank Lloyd Wright accused the architects of knowing too much. I have every reason to believe they know too little.

* * *

At this point my interviewer, Mr. Jones, suggested that this topic may have been the one we have been searching for to fill the blank spaces between my illustrations.

Well, you see, some students and apprentices, to use the old song quoted in the heading above, develop other and newer attitudes. They observe that if there is an unfamiliar problem arising in an advanced thinking office, the office boy (a degree holder) is more often than not elevated to the responsibility of solving it.

There may be a reason for the belief that some education is best theoretical.

They go through the same process in school as well as in practice to arrive at the understanding from recent experience that intentionally designed volumes, to produce certain emotional responses in architecture, failed in many respects. The texture and color took on importance once more. Calder recaptures a new world of sensation and discovers a lot of sur-

(Turn to Page 51)

THE SUBJECT OF "HARDENING OF THE ARTERIES"

By RAY L. DAVIS*

YEARS ago this great and progressive country of ours was a trackless waste—fit habitat only for the savage creatures that roamed its desolate plains and made their homes in its formidable mountains. Today we find that a great change has taken place. Desolate plains have become wide vistas of fertile farming land. Formidable mountains have been made to give up their wealth of minerals, lumber, and power to satisfy the demands of the great metropolitan centers below. The savage has given place to a progressive race of people, capable of harnessing the elements of nature for its own needs.

Probably no other single factor has contributed more to the progress we have undergone than has the item of transportation. From the early beginning of the ox-drawn prairie schooner, the pony express and the stagecoach, our vast and far-reaching networks of shining rails and broad highways, our water-ways, and our sky-ways have developed: A vast arterial system reaching into every corner of our country and bearing to it the lifeblood of the nation. Without it, our country would still be a long way back in the stages of progress. Without constant development to keep pace with the ever increasing demands placed upon it, our progress would be greatly retarded.

As man and his modes of living have changed so also have the structures in which he has lived and congregated. Caves and log cabins gave way to lumber and crude brick buildings, and these in turn—through a gradual transition—to the massive structures of stone, steel, and concrete that we have today. As the arteries of transportation are essential to the progress and development of our country, so are the "transportation systems" within our buildings essential to their utility and beauty. Through arteries of steel pipe, water, gas, steam, and compressed air are distributed throughout our buildings to perform their manifold duties. Through arteries of copper, electricity—that newest and greatest servant of man—flows swiftly to light the building and to operate the elevators, pumps, fans, heating appliances, and the multitude of other devices upon which we have come to depend in our modern modes of living. Without these arterial systems our present types of buildings could not exist: Unless judicious and careful planning goes into their design, the flow of the life-blood of the building is restricted, resulting in greatly impaired utility and early obsolescence. And there is no surer evidence of obsolescence in a building than the failure of its mechanical system to keep up with the demands placed upon it.

Yes, it may be truly said that a building is as modern as its mechanical features. How many times have we had this fact brought home to us upon entering a building that at one time in the not too distant past was an outstanding example of architectural achievement? The architectural features are still there. The structural features are as sound as present-day architecture could make them. The arrangement of the building and the utilization of space was as judiciously worked out as modern practice could accomplish. Structurally, aside from some of the superfluities in the way of decorative treatments which have become antiquated by reason of changing modes of architecture, we have a building that is in every way up to present-day standards, yet some outstanding incongruities are immediately noticeable.

OFFICE BUILDING OF 25 YEARS AGO

Let us make an imaginary visit to an office building which was built, say, twenty-five years ago. The entrance lobby is dark and dingy. Its lighting is provided only by a seemingly haphazard arrangement of bare lamp bulbs in highly ornate brass wall brackets or ceiling pendants: Fixtures which not only fail to enhance the architectural beauty of the room—and that beauty is unquestionably present in some sense—but actually tend to defeat the purpose of the entire scheme by attracting attention to themselves and making impossible a proper appreciation of the design of the room by reason of the glare they emit.

*Registered professional engineer, State of Utah.

The elevator is slow, noisy, jerky, and uncertain, but after two or three unsuccessful "stabs" the operator brings it to rest at our floor and we pass through a corridor, which not only reflects, but magnifies the features of obsolescence in the lobby, to the office suite where our business interview is to take place.

Here again we are confronted with either a twilight dimness or the harsh and uneven light of a glaring—but ornate—lighting fixture. The stenographer is transcribing from a dictaphone record, and she has resorted to the use of an extension cord from a wall bracket lighting fixture to obtain power for her machine. She arises, steps around the dangling cord, and ushers us into the private office. This inner sanctum is practically a duplicate of the reception room except that a bothersome portable fan —also served by a dangling cord from a wall bracket—has been employed in an attempt to dispell the heat of the sultry summer day, and paper weights are much in evidence.

After we have transacted our business, we leave the building, blinking our eyes against the natural light on the street and wondering why our business associate cannot afford office space in more modern quarters.

Now just what experience may we derive from our hypothetical visit to the out-moded office building? We received a general impression of dinginess and obsolescence in the building. Our first impulse would be to say that that building has served its period of usefulness as a modern office building, and that now it may provide quarters only for second rate establishments whose proprietors cannot afford space in the more up-to-date buildings. But we have already said that the structural features of the building are as sound as modern practice could make them. The out-moded decorative treatments are all on the surface and thus could, at a comparatively nominal cost, be replaced by such treatments as would be in accordance with present-day architectural trends. But would we have a modern building then? What about the twilight illumination, the glaringly ornate lighting fixtures, the "rheumatic" elevator, the dangling extension cords, and the paper-rustling fan? Couldn't they be replaced at even less expense by modern fixtures and services? Yes, it would be a simple matter to replace the fixtures themselves, but the difficulty lies in the fact that electrical service facilities within the building are not adequate to handle modern fixtures and services. The electrical distribution, or wiring system in the building was not designed to accommodate the present-day fixtures and uses of electrical service, and that wiring system is **not** on the surface—as is the decorative treatment. A new lighting system, new elevator equipment, convenience outlets, and an air-conditioning or ventilating system could be installed, but only if the wiring system in the building were largely, if not entirely, replaced by a new system. Although the cost of the new system is by no means so great as to be prohibitive—considering the advantages which result from it—it is still from four to ten times as great as would be the expense of putting the same system in a new building.

"Hardening" of the building's arterial system has set in!

ARCHITECTS MUST PLAN WITH FORESIGHT

Conditions in our hypothetical office building are far from being exaggerated, and they are not peculiar to office buildings alone. It does not require an unusual interest or power of observation to recognize similar or even worse conditions every day in stores, theaters, hotels, apartment houses, churches, schools, residences, or any other class of buildings. Otherwise fine buildings are becoming out-moded largely because the features which attract attention first—or at least the features which **could** contribute most toward creating a modern and up-to-date impression—are obsolete and cannot be remodeled without the expense of going **beneath** the surface and making changes in the electrical wiring system.

What, then, is the answer? Are we to condemn those architects and engineers who failed twenty or thirty years ago to design the electrical system of a building to suit present-day conditions? Certainly not! Architecture, as such, is an age-old art. Basic principles which are in use today have been known and used for

centuries. Might we not expect, then, that the structural features of a thirty year old building would be comparable to those of the buildings designed today? Electricity, however, is only now coming into its maturity. It was not until late in the last century that the electrical generator was developed for practical use, while the use of electricity for lighting in its present scope is confined to our own century! It is not necessary to dwell upon the great strides which have been made in the electrical industry during the past twenty years. It is also unnecessary to point out the reasons for the shortcomings in electrical wiring systems which were designed before or during the early part of that period. The thing that we can and **should** do is to see to it that the buildings which we are constructing now are adequately equipped to provide for the full utilization of all of the present electrical services and that a serious attempt is made to anticipate and provide for future requirements.

THE SCIENCE OF BETTER LIGHTING

Lighting has definitely become a science. We have definite standards at present, and we can anticipate the increase in those standards to meet future requirements. Air-conditioning has become sound practice. We know definitely what the present and future requirements—or demands—for this service will be. We are aware of the multitude of uses to which portable appliances may be put and are able to anticipate something of the future demand for outlets to serve them. In short, design procedure to provide electrical wiring facilities for lighting, air-conditioning, fuel, motors, portable appliances, and other services has, by virtue of experience and data gathered during the past decade, very definitely become a science. That science is now ready to go to work to provide an electrical system for the modern building which is comparable to its structural features—a system which, like the decorative features, may be altered at a future date to conform with changing modes without the necessity of a structural remodeling.

The use of this scientific design procedure is now available to the architect. His only problem is to see to it that its value and importance are fully appreciated. If it becomes necessary for economic reasons to eliminate some of the desirable features of a design, that elimination should be made, not in the electrical wiring system, but in some feature such as decorations, fixtures, or other items which occur **on the surface** and which may be altered to suit new conditions without the expensive process of structural remodeling. It is all-important that the arterial system of a building function properly. Its job is a silent and little appreciated one as long as it is done properly, but as soon as it begins to fail to keep pace with the demands placed upon it, its defects become glaringly evident. Hardening of the building's arteries has set in, and this condition is just as surely an evidence of the beginning of the end as is its medical counterpart, **Arteriosclerosis,** in the human body.

IMPORTANCE OF ADEQUATE WIRING

Now, more than ever before, it behooves the architect to pay particular attention to the electrical features of his building. The electrical industry, as a whole, has suddenly come to realize that the time is fast approaching when it is going to be difficult to sell customers additional appliances which they want and need, due to lack of facilities to serve those appliances. As an industry, the electrical people have decided to do something about it. Organizations have been set up, and considerable money is being spent in advertising for the sole purpose of making the building public "wiring conscious." It is impossible to pick up any magazine associated with building or homemaking without encountering a barrage of "adequate wiring," "hardening of the arteries," "electrical bottle-neck," etc. It is almost as nearly impossible for any prospective builder to escape a personal call from a field worker of the electrical industry, who will explain the advantages of adequate wiring and even offer expert planning service to the builder—usually free of charge.

As may be expected, the idea is taking hold. The story is a good one and with such an organization behind it it is sure to reach the public and gain acceptance. The architect then is, literally speaking, "on the spot." His function

in the building industry is to give his client the best structure possible for the amount of money available. It is his problem to balance the necessary features against those which are merely "desirable" and achieve the best results possible. His professional success, obviously, depends upon the confidence which he is able to build and maintain in his clientele. Now, a new condition has arisen. In the first place, his client is wiring conscious—at least to some extent. That client, then, is going to expect an electrical system which is judiciously designed from the standpoint of adequacy—for both present and future needs. He may not go into details—he expects his architect to handle them—but if he doesn't get an electrical system that comes up to his expectations, his confidence in his architect will be shaken. In the second place, the electrical planning service mentioned above is also available to the "jerry builder." Would it be well from the architect's standpoint to have his job compare unfavorably with the "jerry job"—especially after the short time necessary to forget a few small differences in cost? True, the architect could, if he were given the chance, justify his claims of superiority on the basis of structural or other details. But these are not the details that are under fire with the public.

Adequate wiring is in the spot light, and it will continue to be until the electrical industry feels that it may safely withdraw its fire. The adequate wiring parade will move—even as has the "better light-better sight" movement. There are few architects today who do not give much greater consideration to the problem of providing adequate lighting for their clients than they did a few years ago. Of even greater and more fundamental importance is the problem of providing adequate wiring. The movement is only in its infancy now, but every day it is gaining in momentum, and it is a safe prediction that in the very near future the general public will be wiring conscious to an even greater extent than they are lighting conscious at the present time. Would it not be wise then for the architect to investigate the problem very carefully with the idea of keeping in the advance of this parade, at least in-so-far as his own convictions will allow?

University Baptist Church,
Seattle, Washington.
Frederick V. Lockman, Architect.

U. S. URGED TO BUILD HOMES INSTEAD OF CANTONMENTS

By PERCY WILSON*

WILL America build or destroy?. The answer to that question in the face of a housing deficiency of two million homes today challenges the entire resources of the building industry. Internal revolution and the rise of dictatorships from the time of Juarez in Mexico, through post war Russia and Italy and today's Germany, have been traceable to housing shortages and unequal distribution of land ownership. A people largely composed of homeowners has little taste for war and no patience for the doctrines of dictatorship.

For us to seek again to make Europe safe for Democracy is to try to cure a disease from without, which, experience is beginning to show, can only be cured from within. Let us weigh our choice this time. I think we will choose to stay here and keep America safe for Democracy. It is not our war regardless of what our sympathies may be. We can help to keep America out by contributing our entire weight to the maintenance of a government "of the people, by the people, and for the people" with the power to decide whether the people and not individuals or groups want to fight on other battlefields.

Furthermore, entrance of the United States in the present war will unquestionably cause almost complete cessation of private residential building and probably regimentation of private business.

But we should not get into European war. Calm retrospection and analysis, once freed from emotion, sentiment or adventure leads to the stark reality that the recurring causes of war in Europe are inherent in the multiple complexity of a continent of competitive racial groups, policies, and customs. The roots of these trees were growing in the old world over a thousand years before our civilization was thought of. It was these very reasons which led our forefathers to leave the old world, and who are we, to think we can now cure all these deep-rooted poisons of half a billion people and twenty-five nations on the other side of the Atlantic.

From the dawn of civilization the most common, direct or concomitant factors of internal revolution of countries and people have been restricted privileges of land and home ownership. Whenever conditions made land and home ownership the privilege of too small a minority, clever organizers of mass psychology and leaders of mass action, sensing the desire of an oppressed people for recognition of equality, have skyrocketed into power.

The economic chaos that the last war left behind it mothered most of the ills of modern Europe. One of the chief amongst this monster brood was the acute housing shortage and inadequate distribution of land ownership felt in every state. At the end of the Great War every nation was strained to the utmost financially. Some withstood the tremendous destruction of capital goods more than others. However, England and France, with their monetary standards grounded in gold, withstood the crisis with a minimum of inflation as did the United States.

Other countries of Europe were less fortunate. Russia had become a seething cauldron of revolt and counter-revolt, with currency virtually valueless, rents increased out of all proportion to income, aggravated by an influx of people to the city. The result was that as late as 1924 there were less than 100 dwellings for every 168 families in Russia. Despite the fact that Italy was on the victor's side her average worker, due to housing shortage, now is paying 23 per cent of his income in rent as compared with 11 per cent prior to 1914. In Germany the greatest monetary inflation known to the modern economic world boosted rents so fantastically the government was forced to "peg" rentals to check the rise. Building virtually ceased and in 1925 the deficiency of housing units was reported at 800,000.

In the present hazards of entanglements in the conflict of Europe this country is facing a challenge—the challenge of whether the present trend toward individual home ownership will live and continue to protect peace, family happiness, and the rights of freedom and solidity

*Abstract of an address before the 20th anniversary meeting of the Plumbing and Heating Industries Bureau, Chicago, October 5.

in this country, or be destroyed by the destructive influence of war chaos with a possible dictatorship resulting in a totalitarian state or a republic again thrown into all the social and financial disruption which is the price and aftermath of war. That we have a shortage of homes now, and that we are in a rising business cycle are facts that need no emphasis in this country. The shortage of homes is well over two million.

The full effect of a continuance of the present war without belligerent participation by us is still only conjecture; there is no close analogy between the last war and now. In the first place, we did get into it. In the second place, August, 1914, found us in a building activity downswing with conditions looking rather worse than better.

This time we were apparently in the early stages of a building upswing with conditions in some quarters looking rather better than worse.

This does not mean, however, that the building industry will not feel the impact of war stimulation. On the contrary, it is my opinion that the building industry is just on the verge of a real upswing of its own and that war without our participation, will accentuate.

Our people have, to a great extent, become a budget-buying nation. Demand is supplied when desire is given a means of fruition. People usually have a desire for a home. Recently it has been reduced to the simple formula of long-term mortgages, paid off at low interest rates in monthly installments like rent with insurance and taxes thrown in, and a market has been opened for homes at a time when there would otherwise have been little or none. This market has also lately been widened by the recent further reduction in mortgage interest rates and an increasing tendency to build homes for the lower income brackets. The average size of mortgages for new residential construction has been constantly decreasing, and thereby indicating that most of the demand was for mortgages for low cost homes. I believe the average FHA Title Two loan is now around $5,000.

ARCHITECTURAL CONCRETE WAREHOUSE FOR H. J. HEINZ CORPORATION, OAKLAND

WATER SOFTENING PLANT FOR COLORADO RIVER AQUEDUCT

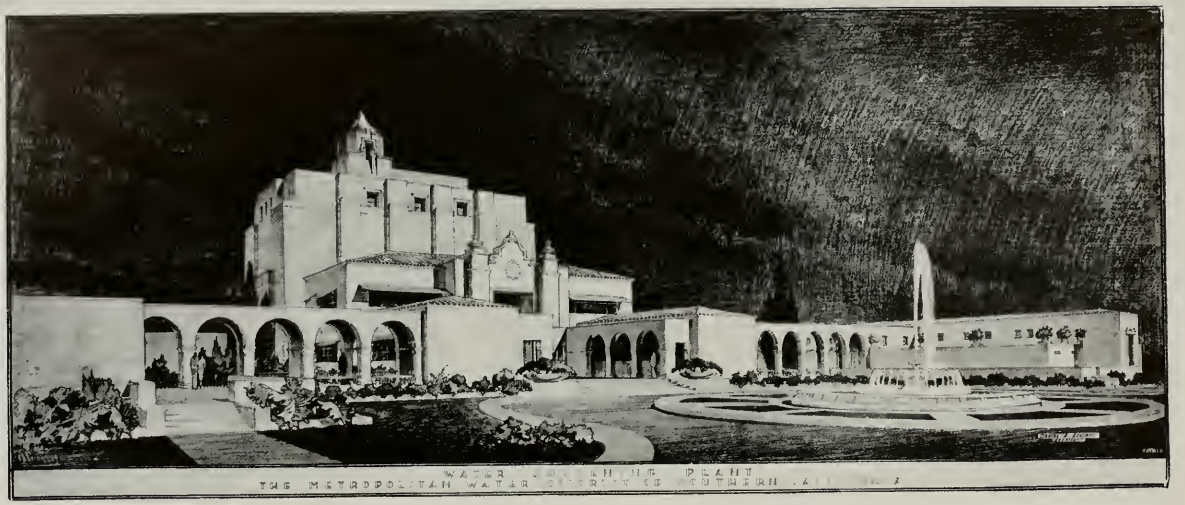
THE Metropolitan Water District of Southern California has adopted an exceptionally ambitious program of architectural interest—a group of buildings on an 82-acre tract one-half mile south of Foothill Boulevard, Los Angeles. Said to be one of the largest plants of its kind in the country with a capacity for treating 100,000,000 gallons of Colorado River Aqueduct Water a day, the improvements will represent an ultimate expenditure of $3,200,000.

The site for the plant, which must be cleared for construction, is now covered with orange trees, being in the heart of the rich Foothill citrus district through which the upper feeder of the distributing system of the aqueduct from Cajalco reservoir passes. The water softening and filtration plant will be located approximately 1200 ft. north of the feeder line and the contract will include the construction of a turn-out and two 11-ft. inside diameter reinforced concrete lock-joint pipe lines, one being an influent conduit carrying water to the plant and the other an effluent conduit returning the treated water to the feeder line to continue on its way to the cities which will be served by it.

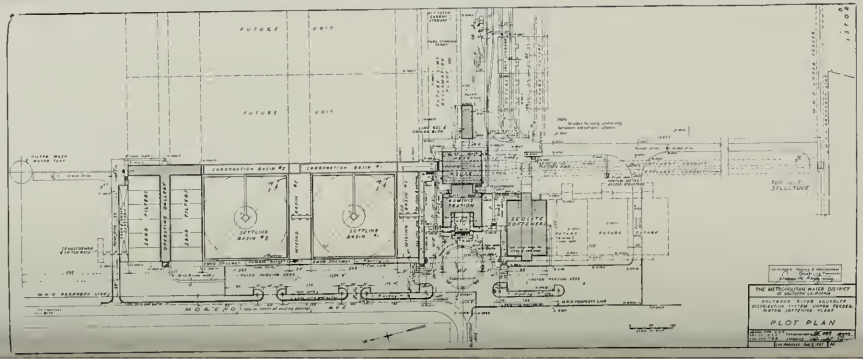
The treatment plant will cover an area approximately 233 x 1000 ft. and will consist of a head house 74 x 92 ft. where lime, soda ash and other chemicals will be stored and fed into the water as it passes through the influent channel; an administration building 92 x 92 ft.; two settling basins each 200 x 200 ft., with adjacent mixing and carbonization basins; 12 sand filters covering an area approximately 121 x 223 ft.; a zeolite influent channel and a by-pass, only half the water going through the zeolite, and a structure 77 x 129 ft. containing 12 zeolite softeners. There will also be a lime-reclamation and cooler building, 27 x 71 ft., minor appurtenant structures and conduits, storage tanks, paved drives and a 34-ton platform scale.

The plant is designed for treatment of the water by the lime-Zeolite process, Zeolite being a "base exchange" material having the appearance of fine sand. Hardness of water is due to compounds of calcium and magnesium dissolved in it. The three principal ones in Colorado river water are calcium bicarbonate, a solution of limestone in water containing carbon dioxide; calcium sulphate or gypsum, and magnesium sulphate. When lime is added to hard water it will combine with the dissolved calcium carbonate and form calcium carbonate, or limestone, which can be settled out in basins and removed. This reduces the carbonate hardness, but it is not enough. To reduce the sulphate hardness, the water is passed through Zeolite which exchanges sodium for the calcium and magnesium in the water. The result is zero hardness, but as this is not necessary only half of the water goes through the softeners and is mixed with the lime treated water. The lime is reclaimed by calcination and may be used again. The Zeolite is regentrated by passing salt brine through it, the former exchanging its calcium and magnesium for the sodium in the brine. Filtration of the water through sand is also a part of the softening process utilized in this plant.

A complexity of construction is naturally involved in building a treatment plant of this kind. All of the buildings and structures will be of reinforced concrete except the head house, which will have a steel frame with reinforced concrete walls and floors. They make a very imposing group designed in modified Spanish Colonial style of architecture. The largest structure is the head house topped by a tower in which a water tank will be installed. The pinnacle of the tower will be 118 ft. above the ground level, the floor of the basement 13 ft. underground, and the footings of the columns 29 ft. below the surface. This building, carrying unusual loads on the upper floors, is



PERSPECTIVE OF AQUEDUCT WATER SOFTENING PLANT, SAN DIMAS, FOR METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA. ARCHITECTURAL PLANS BY DANIEL A. ELLIOTT, METROPOLITAN WATER DISTRICT ARCHITECT. TOWER ON THE HEAD HOUSE WILL ENCLOSE A PRESSURE TANK FOR DOMESTIC WATER SYSTEM AT THE PLANT. ADMINISTRATION BUILDING WITH PATIO ENTRANCE IS IN FRONT OF THE HEAD HOUSE AND THE ARCADES CONNECT WITH ZEOLITE SOFTENER BUILDING ON RIGHT AND FILTRATION BUILDING ON LEFT. DRAWING ON RIGHT SHOWS THE LAYOUT OF THE PLANT WHICH WILL HAVE A CAPACITY FOR TREATING 100,000,000 GALLONS PER DAY. HOOVER & MONTGOMERY ARE THE CONSULTING ENGINEERS WHO DESIGNED THE PLANT.—Metropolitan Water District Pictures.



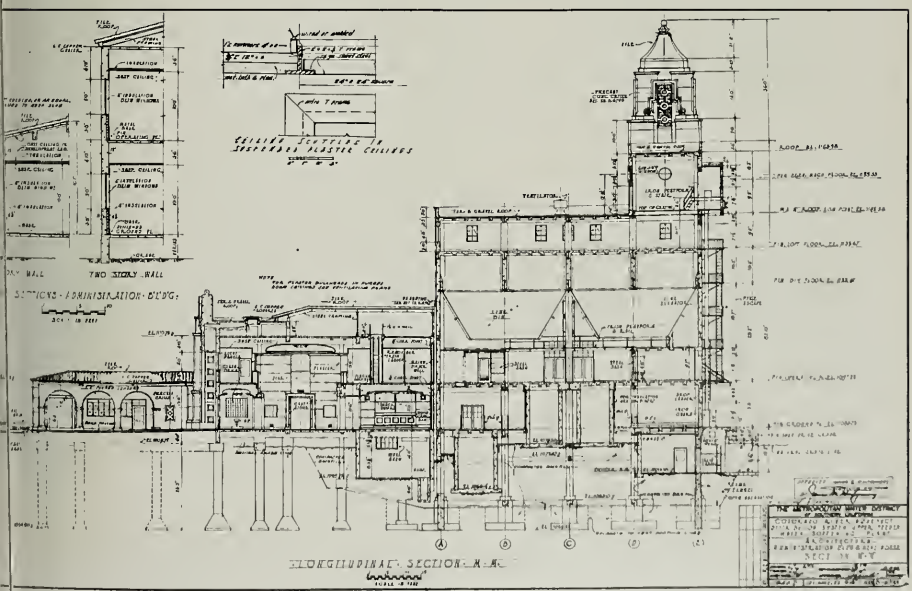
heavily designed and will be separated from the adjacent administration building by an 8-in. open seismic joint.

Because of the necessity for good foundations, the site was thoroughly explored, test cores revealing a satisfactory bearing gravel about 29 ft. below the surface. Excavation for the head house will be carried down to the bottom of the spread footings upon which the steel frame of the building will rest. Both the influent channel and the effluent by-pass run underground through the head house. There will also be in the basement a carbonation compressor room, chlorine room, generator room and a shop. A compacted back-fill will be placed in all the unoccupied space.

The administration building will be a reinforced concrete structure, part one and part two stories, with a patio entrance and a pitched roof covered with Mission clay tile. It will have steel roof trusses. There will be a central circular lobby two stories in height around which will be grouped offices and laboratories; also a demonstration class room 21 x 72 ft. and a development laboratory approximately the same size. Footings for the administration building will be carried down to gravel foundation in 30-in. caissons bell-shaped at the bottom. Covered concrete arcades will extend from the administration building to structures on either side. The other buildings and basins will be reinforced concrete construction. The sand filters and Zeolite softeners will be fully enclosed. The former will have a flat slab foundation.

Steel window and door frames with steel casement sash and hollow metal doors will be installed throughout the main buildings. There will also be an air-conditioning plant for complete heating, cooling and ventilating service with a capacity of 6600 cu. ft. of air per minute. A freight elevator will be installed in the head house.

F. E. Weymouth is general manager and chief engineer of the Metropolitan Water District; Julian Hinds, assistant chief engineer, and Hoover & Montgomery of Columbus, Ohio, consulting engineers on the water softening and filtration plant.



ARCHITECTURAL CONCRETE WAREHOUSE, LOS ANGELES

MAIN ENTRANCE TO BUILDING FOR H. J. HEINZ CORPORATION

(Concluded from Page 40)

prise elements in decorative constructions. Students begin to re-recognize the decorative styles for new explorations, unfortunately not always successfully, for the tendency toward old fashioned decoration, trivolity and superficial eccentricity is all too persistent.

Why should not the students know and be prepared to meet new emergencies, instead of being upset when faced with the present confusion of precision and the impact of technological change upon modes of life? Why should they not know that literary forms precede other art forms, as art books claim—or that distribution is more expensive than the product? They should know that it was said of some housing experts that they imagined poverty but did not feel it. Should they dust off the "Bauhaus" once more for further guidance?

It is a curious fact that some recent architects of the modern persuasion in Europe were good at design, taught and preached by putting the concept before reality, without having much building experience, with resulting sad experiences. This reminds me of a Japanese Olympic team which learned to skate on ice from books before they got to practice.

Matisse said concerning education: "In order to know whither you are bound, you have to know whence you came." Architectural principles have not changed. It is the ways and means of expressing them that have changed. In the future, I hope, our attitude to the past will be less self-conscious. At present one must discipline young men's minds, teaching not only facts but the proper presentation of facts.

The educator who was once thought qualified to prescribe for ignorance, as a physician does for disease, is reduced to the role of a nurse, and the student's tendency is to become both the patient and the doctor, selecting whichever kind of pill looks easiest to swallow. "We must avoid promoting education along the lines of training only and avoid too many specialists," Dr. Mayer once said concerning Education.

This is not an indictment of students, but there is a curious lack of desire for exertion among most of them in the direction of attainment without definite ultimate objectives.

* * *

My interrogator here interrupted to ask: "What do some students say on this subject?" "Well," I said, "one smarty pronounced very sagely that 'the cream of educators today is the cheese of tomorrow'." This concerned, I guess, some modernists who are already conspicuous by the amount they were left behind.

The problem of adequate architectural education is still unanswered. Should it be factual and scientific, open to certain fashionable vagaries, or should it be put on a broader basis of scholarship and freedom to pursue the truth to wherever it may lead.

The employer architects in their daily attempt of pursuit and capture of clients must not fail to estimate the possibilities of the newcoming material, their future associates. I have recently had a chance to make such an estimate by overhearing a question put by one young draftsman to another at an architectural show: "Under what name are you exhibiting here?"

BUILDING VOLUME FOR OCTOBER SHOWS RESIDENCE DROP

ARCHITECTS' Reports building totals for October showed continued construction activity in the territories covered by this news agency. While the total volume of "Plans in Progress" work was less last month than in September, the volume of improvements listed as "Projects Out For Bids," was greater than the previous month by some twelve million dollars. In this latter column, the Federal Government received proposals for more than $17,000,000 in estimated new construction. Other items figured under this heading included $1,677,000 for apartments and $260,000 for industrial betterments.

The grand total for the month amounted to $33,503,166 as compared with $43,182,024 in September. In the "Plans In Progress" column, a considerable drop is noted in residence work, due probably to the uncertainty of war conditions. In September, the residence work reported under "Plans In Progress" totalled $79,000, while in October, the total was only $37,000. In "Contracts Awarded for Residences"

(Turn to Page 70)

14 STORY FEDERAL BUILDING FOR SAN FRANCISCO

The proposed Appraisers Stores and Immigration Building for San Francisco will be a fourteen story structure of modern design, according to the plans and specifications recently completed by the Public Buildings Administration of the Federal Works Agency. The site is the lot bounded by Customs House Place, Sansome, Washington and Jackson Streets, an allotment of $4,250,000 having been made under the Emergency Construction Program Act of 1937 for demolition of the building now on the site, the cost of the new building and administration.

Announcement was made on October 23 by the Public Buildings Administration that this project had been placed on the market for competitive bidding. All bids from prospective contractors are scheduled to be opened publicly in Washington, D. C., at 1 p.m., December 6th.

The new building for the Appraisers Stores and the Immigration Service will replace two of San Francisco's historical structures: the present red-brick Appraisers Stores building opposite the U. S. Customs House, and the building on Angel Island which has been in use by the Immigration Service since 1910.

The present Appraisers Stores Building will be demolished to make way for the new structure which will use the same site. The walls of the old building, constructed in the early days of San Francisco, are said to be several feet thick and rest on a "floating" concrete slab, a structural device that was necessary to support the building above an earth filled lot.

Four of the fourteen stories of the new building have been designed to house the inspection rooms and offices of the Appraisers Stores. Offices for local branches of the other Federal departments and agencies, including Coast and Geodetic Survey, Coast Guard, National Labor Relations Board, Bureau of Indian Affairs, Social Security Board, Forest Service, Agricultural Economics, Bureau of Mines, Bureau of Standards, and the U. S. Maritime Commission will occupy the fifth through the tenth floors. The top four floors will be given over to the work of the U. S. Immigration Service.

A feature of the quarters for the Immigration Service, where immigrants awaiting deportation or clearance of entry papers must be domiciled, is the series of sun decks and recreation courts occupying all the available roof space of the building.

The living quarters for immigrants will be fitted with modern kitchens where the special foods of each race may be prepared. The floors devoted to the Immigration work will also be equipped with complete, modern hospital service, as well as a laundry.

Immigrants will be taken to the top section of the building by special elevators in a lobby which will be reached from Jackson Street. The main entrance to the Federal building, however, is from Sansome Street.

The Appraisers Stores and Immigration building was designed by Gilbert Stanley Underwood, Consulting Architect of the Office of the Supervising Architect of the Public Buildings Administration, Federal Works Agency. In commenting on the architectural style of the structure Mr. Underwood said: "The design follows the straightforward lines of contemporary architecture in which the building relies on a subtle effect of voids and solids, pure ornament being held at a minimum.

NORTHERN CALIFORNIA CHAPTER

The regular monthly meeting of the Northern California Chapter, A. I. A., was held at the Alexander Hamilton Hotel, Tuesday, October 31, at 6:30 p.m., President James H. Mitchell presiding.

Members present: Wm. Clement Ambrose, John Bakewell, Jr., Will G. Corlett, Albert J. Evers, Edward L. Frick, Henry H. Gutterson, Andrew Hass, Lester Hurd, Ellsworth E. Johnson, Thomas J. Kent, Lawrence A. Kruse, Charles F. Maury, Leffler B. Miller, James H. Mitchell, Irving F. Morrow, Gwynn Officer, Paul A. Ryan, Alfred C. Williams, Ernest E. Weihe, John Davis Young.

Mr. Mitchell expressed the appreciation of the Chapter for the good work done by the Architects' Day Committee under the chairmanship of Wm. H. Knowles, and also for the efforts of the various individuals who contributed their time and talents toward making Architects' Day at the Exposition the fine success it was.

Ernest E. Weihe was introduced as the newly-elected president of the State Association of California Architects

Business of the evening consisted of reports of the delegates who attended the recent Institute Convention in Washington, D. C.

Mr. Bakewell described the convention meetings and the manner in which business was conducted. He related several very amusing incidents illustrating the ready wit of Mr. Maginnis, president of the Institute, and also discussed arguments for and against the Unification Plan as they were advanced at the convention. Mr. Bakewell told of a committee for Preparation for Architectural Study, and mentioned some of the problems that had been encountered in investigating the various schools to rate them as to professional standing.

Mr. Frick gave a thoroughly enjoyable account of the visit to Williamsburg made by our Chapter delegates. He also discussed the talks on Illumination that were given at one of the convention meetings, and described Architects' Day at the New York Exposition.

Mr. Weihe gave a brief resume of the convention of the State Association of California Architects and stressed the mutual agreement evidenced between all parties as to a program of legislative procedure for the coming year.

With the Architects

REDDING HIGH SCHOOL ADDITIONS

New units to the Shasta Union High School at Redding, consisting of eight classrooms and a boys' gymnasium, have been authorized and bonds voted in the amount of $130,000. The plans are being prepared in the office of Charles F. Dean, California State Life Building, Sacramento.

DRIVE-IN MARKET

A one-story frame and stucco drive-in market, estimated to cost $12,000, is to be erected at 16th and "O" Streets, Sacramento, for the Safeway Stores, from plans by Herbert Goodpastor, Mitau Building, Sacramento. The same architect has completed working drawings for a kindergarten addition to cost $12,000 for the Corning Grammar School District.

STOCKTON LAUNDRY BUILDING

The New Method Laundry Company has had plans prepared by Elmore G. Ernst, 561 East Harding Street, Stockton, for a one-story brick building to be erected at Hunter and Fremont Streets, Stockton. Building will be 70x70', and will have white brick exterior.

UNIVERSITY SHOP BUILDINGS

Plans have been completed by Arthur Brown, Jr., 251 Kearny Street, San Francisco, for a group of reinforced concrete shop buildings for the University of California. They will be erected on the University campus, Berkeley, at an estimated cost of $60,000.

SAN FRANCISCO APARTMENTS

Messrs. Hertzka & Knowles, 369 Pine Street, San Francisco, have taken bids for a twelve, 3-room apartment building of frame and stucco to be erected in San Francisco for an unnamed client.

MILITARY ACADEMY ADDITION

A $20,000 recreation building is planned at the San Rafael Military Academy, from drawings by Norman W. Sexton, de Young Building, San Francisco.

D. E. JAEKLE BUSY

New work in the office of D. E. Jaekle, 126 Post Street, San Francisco, includes remodeling a three-story store and flat building at Dolores and 22nd Streets, San Francisco, an $8,500 residence in Rose Park, San Jose, and a residence in Millbrae for James W. McCabe.

PIEDMONT RESIDENCE

Plans have been completed by Clarence W. Mayhew of Oakland for a $9,000 seven-room house in Piedmont for Dean Donaldson, 684 Longridge Road, Oakland.

FEDERAL HOUSING PROJECT

Plans are in progress in the office of Albert F. Roller, 1 Montgomery Street, San Francisco, and Roland I. Stringham, 525 Market Street, San Francisco, for Federal Housing Project No. 3 in Visitacion Valley, consisting of ninety buildings with 772 dwelling units. The appropriation is $2,000,000.

PRODUCERS' COUNCIL XMAS JINKS

The annual Christmas jinks of the Producers' Council, with local architects as guests, will be held at the Lakeside County Club, Ingleside, San Francisco, Tuesday evening, December 12th. The afternoon of the same day will be devoted to golf.

SANTA ROSA FIRE HOUSES

Working drawings are in progress for two municipal fire houses at Santa Rosa for which bonds in the amount of $60,000 have been voted. Alternate plans for reinforced concrete and wood frame and stucco are being drawn by William Herbert, architect of Santa Rosa.

OAKLAND STORE BUILDING

A one-story brick and steel store building, 30x100', with Vitrolite front, is an improvement planned for 14th Street, Oakland. Chester H. Treichel is the architect and Edward Larmer, 288 Indian Road, Oakland, the owner.

MARTINEZ CHURCH

The Church of Jesus Christ of Latter Day Saints at Martinez has had plans prepared by Theodore G. Ruegg, San Francisco, for a $12,000 edifice with a seating capacity of 150. The structure will have asbestos wood siding, composition roof, maple floors and gas hot air heating.

SANTA CRUZ THEATER REMODEL

A. A. Cantin, 704 Market Street, San Francisco, has completed plans for remodeling the Santa Cruz theater at Pacific and Walnut, Santa Cruz, at an estimated cost of $9,000.

LABORATORY BUILDING

Plans have been completed by F. Eugene Barton, Crocker Building, San Francisco, for a building at Fourth and Parker Streets, Berkeley, for the Cutter Laboratories. Construction will be of reinforced concrete and steel with steel sash and composition roof.

TO COMPLETE SCHOOL INTERIOR

Plans have been completed and bids taken in the office of Dragon & Schmidts, Berkeley, for finishing the interior of the high school classroom building at El Cerrito for the Richmond High School District.

PASS STATE EXAMINATION

Harold Hovin and Howard Gates, architectural draftsmen employed in two Spokane offices, recently passed the examination conducted by the Washington State Committee of Architects' Examiners and are registered architects. Mr. Hovin will continue in the Charles Carpenter office and Mr. Gates will remain in the employ of Whitehouse and Price.

Three architects were licensed by the Oregon State Board of Architect Examiners following recent examinations. They are: Millard H. Schmeer, Jr.; Robert B. Morden and Bruce Kinne, all of Portland.

ARCHITECT-SINGER

Frederick V. Lockman, Dexter Horton Building, Seattle, in a recent trip to the Golden Gate Exposition took an active part in the concert performance of the Ralston Club, Seattle men's choral organization, which won first place Pacific Coast honors in the choral contest.

HIGH SCHOOL GYMNASIUM

A $30,000 addition is being built to the Ripon High School, consisting of a frame gymnasium, from plans by Harold H. Weeks, Balboa Building, San Francisco.

PIEDMONT RESIDENCE

Plans have been completed in the office of Miller & Warnecke, Financial Center Building, Oakland, for a six-room dwelling in Piedmont for Fay G. Taylor, 912 Blair Avenue, Piedmont.

TWO MARTINEZ DWELLINGS

Plans have been completed by B. Reede Hardman of Berkeley for two 1-story frame dwellings, each with six rooms and two baths, for an unnamed client in Martinez, Contra Costa County.

AUTO SERVICE BUILDING

Andrew H. Knoll, Hearst Building, San Francisco, has completed plans for an auto sales and service building at Mountain View. The structure will be one story concrete, 50x100', with wood trusses and composition roof. The estimated cost is $15,000.

BELVEDERE RESIDENCE

From plans by Angus McSweeney, 604 Mission Street, San Francisco, a two-story and basement frame dwelling is to be erected at Belvedere, Marin County, for A. McDonald.

$12,000 RESIDENCE

The Surburban Builders have had plans prepared by Chester H. Treichel, 696 Cleveland Avenue, Oakland, for a $12,000 speculative residence in Woodside, San Mateo County.

OPENS SAN FRANCISCO OFFICE

Clarence W. Mayhew, architect, with an office at 6026 Acacia Street, Berkeley, now maintains in addition, a San Francisco office at 712 Montgomery Street.

WASHINGTON STATE CHAPTER

The regular meeting of Washington State Chapter was held at the Benjamin Franklin Hotel, Seattle, on the evening of Thursday, October 5, with a good attendance. After a pleasant social gathering and enjoyment of a dinner, the business meeting was called to order by Vice-President Bain in the absence of President Naramore. Mr. Bain welcomed as new members and associates, Clare Moffitt, Pierce Horrocks and Frank Smith, Jr.

Applications for Junior Associate of the Chapter have been received from Anne Westbrook Gould and Carl Frelinghuysen Gould, Jr.

Mr. Jacobsen reported for George Gove of the education committee on the arangements being made for the annual sketch competition. This year the work is to be of sketches having any architectural character with special attention given to architectural renderings. Prizes are to be subscriptions to architectural magazines.

Mr. Grainger, chairman of the unification committee, reported on a proposal that had been made by Mr. Borhek relative to the formation of a State Association of Architects, and it was voted that Mr. Grainger prepare a synopsis of the proposed plan.

The business meeting having been concluded, Mr. Loveless introduced, Dan Huntington, former Chapter member, who presented, with appropriate description, motion pictures in color which he had taken during his assignment on Government work in outlying portions of the state and on a vacation trip. These included interesting views of Coulee Dam and surrounding country, the Oregon coast and the coast of California, including the Golden Gate Exposition then under construction.

The proponents of the unification program proposed by Mr. Borhek to be under the name of Licensed Architects of Washington, have submitted for the Chapter's consideration a five-point statement of purposes which may be conveniently condensed into one:

> To increase the business of its members by publicity and the elimination of non-member competition.

To accomplish this aim, the proposed organization relies on numerical strength and adequate finances.

Preliminary organization is described and suggestions offered for the permanent organization procedure after 150 members have pledged their support.

The proposed plan provides that meetings of the organization be held annually with provisions for special meetings in the interim, that Board meetings be held monthly and, to meet the expense of organization, administration, publicity, traveling expenses, etc., that there be an entrance fee of $1.00 with dues for the first year $9.00 and thereafter 1% of the gross architectural fees of the members.

OREGON CHAPTER MEETINGS

The regular monthly meeting of Oregon Chapter, A.I.A., was held in the private dining room of Irelands, Lloyd's Clubhouse, Portland, Tuesday evening, October 17.

A report of the Institute Convention and by-paths by delegates Stanton, Belluschi and Morin were made and plans for the joint meeting of the Oregon-Washington Chapters at Grand Coulee, November 4 and 5 were announced .

At the September 19th meeting President Stanton spoke of executive committee activities, reference being made to the recently appointed committee to study the development of Council Crest; also of the renewed activity for the development of the water front.

The resignation of Mr. Crowell as chairman of the building code committee was announced. President Stanton expressed the Chapter's appreciation of work done by Mr. Crowell.

A resolution was read of New Jersey Chapter, relative to proposed revision downward of recommended fees for architects engaged on projects coming under the U. S. Housing Authority. On motion of Mr. Jacobberger the Oregon Chapter voted to support the New Jersey Chapter in protest of such revision.

SAN FRANCISCO ENGINEERING COUNCIL

A joint dinner meeting of the San Francisco Engineering Council will be held at the Engineer's Club, 206 Sansome Street, San Francisco, the evening of December 1 at 6:15, followed by a meeting in the Pacific Gas & Electric Auditorium, 245 Market Street at 8:15. The subject for the evening will be "Modern Motor Fuels, Their Production and International Significance," discussed by Dr. Gustav Egloff, director of Research, Universal Oil Products Co., Chicago, Ill.

Dr. Egloff has written 370 articles relating to the petroleum industry and the chemistry of hydrocarbons, particularly the cracking and refining of oil. He has studied oil cracking for more than twenty years; 240 patents have been issued to him in the United States and abroad relating to processing of petroleum, oil, coal, shale oil and chemical derivatives of hydrocarbons.

The committee on advanced study of the San Francisco Section announces a course of ten lectures on "Mechanics of Materials and Theory of Structures," by Doctor Stephen P. Timoshenko, Professor of Theoretical and Applied Mechanics of Stanford University, to be given 2:00 to 4:00 p. m., Saturday afternoons at the Engineers' Club.

Doctor Timoshenko is the author of books on applied elasticity, vibration problems in engineering, strength of materials, theory of elasticity and theory of elastic stability. He is Consulting Engineer to the Westinghouse Electric and Manufacturing Company. This year the Society for the Promotion of Engineering Education awarded him the Lamme Medal for achievement in engineering education.

Some sixty members have expressed an interest in such a course. Lectures will begin on November 18 and continue weekly or bi-weekly thereafter for ten lectures.

HOUSING CENSUS IN 1940

An answer to the age-old proposition of "how the other half lives" will be available to the entire population of the United States and its possessions when the first nation-wide Census on Housing is concluded next year.

The results of the survey should be of immense value to the entire building industry, too, in that it will provide a wealth of information to guide the construction of better homes at lower cost.

The survey, which will start next April and will embrace every State, the District of Columbia, Hawaii, Alaska, Puerto Rico and the Virgin Islands, will be made in conjunction with the 1940 Census of Population.

Among the fundamental facts which it is expected the survey will bring to light are the following:

Total number of dwellings under the American flag.

Types and style of structures.

Essential household facilities (i.e., plumbing, cooking, refrigeration, etc.).

Age, condition and state of repair.

Amount of overcrowding and doubling-up of families.

The monetary values of homes occupied by owners.

The rentals charged for leased dwellings.

Present mortgage status of dwelling properties.

The costs of home financing.

Hailing the housing census as a most important and much needed constribution to the better housing movement in this country, Nathan Straus, Administrator of the U. S. Housing Authority, added:

"The forthcoming United States Census of Housing should unquestionably provide basic data vital to the planning of an effective national housing program for all the various income groups of our population. When the census findings are compiled and published, they should stand as a challenge as well as a chance for private capital and government to cooperate in producing better homes at lowest cost."

WASHINGTON SOCIETY MEETING

Fifteen members of the Washington State Society of Architects assembled October 12 to discuss problems facing the profession. President Harry G. Hammond presided.

STEEL INDUSTRY WOULD SUFFER IF WAR CAME

CLYDE G. CONLEY of Mount Vernon, Ohio, President of American Institute of Steel Construction, at its Seventeenth Annual Convention in New York October 17, declared that the European war would have a disastrous effect upon the fabricated structural steel industry. He asserted that it would be to the best interests of every member of the industry to use all of his influence to keep this country out of the conflict. Following are extracts of President Conley's address:

"We meet today under conditions very different from those which confronted us last year. We have found it possible to live through other emergencies, I am sure we have the capacity and the genius to live through this.

"I want, at this point, to add my voice to those of other business men who have so ably shown that war is not good for business. According to economic law, anything that destroys property or any other thing of value is a detriment to the good of humanity. Therefore, over and above any suffering and death caused by war, looked at purely from a business standpoint, war is not good for humanity. Since business depends absolutely for its wellbeing and the economic success of humanity, war is not a good thing for business.

"While war may bring some industries a temporary profit, it is not so with us. The steel industry is in the position of selling short, as they say on the stock market, therefore we get caught by higher prices generated by war, and lose that short term profit enjoyed by some industries. When the other industries are hit by the backwash after the war, we in our turn instead of being able to average up with the others, are forced to undergo a long period of stagnation until accumulated savings wipe out the deficit and new construction is again possible.

"From such experiences, however, has this industry tested its capacity to withstand crises. This organization came into being as a result of the industry's need to find a common ground to meet the problems growing out of reconstruction from the first World War. No sooner had we passed through that trouble than we were confronted with the depression of the 30's. Despite the greater threat of war to the health of our economy I am sure we will find the equation that will solve this emergency for us likewise.

"Strife and bloodshed are the results of too much political unrest. Although business may not be the cause of such unrest, it feels the effects of it. We may not be authorities on political economy but we do have the right to evaluate political policy by the one and only measure we know, its business-like practicability. We must face political idealogies even if we are helpless in changing them.

"Ever since the World War the peoples of all nations have been seeking a new way to gain and insure their economic self-sufficiency. This trend has been described as the fight between the "Haves" and the "Have-nots." For the lack of better definitions the nomenclature is as good as another. In Russia the fight has resulted in communism; in Germany and Italy it has resulted in fascism; in the United States we see somewhat the same thing in the movement to "redistribute wealth." With the general objectives we may have the greatest of sympathy, but that should not blind us to the practicability of the means proposed from time to time to achieve greater wealth and greater security for all our people.

"Some want to create a new system for the capitalistic system, but state capitalism would not prove as efficient as our system of private capital. To use the capital of the state to finance consumption—and that is what really happens when we set up state relief—is nothing short of compelling the private producers to give away their property and their labor. Call it taxation or deficit financing, it amounts to the same thing. To compel producers to give up their sustenance is expecting too much. It is a dangerous expedient even as a temporary measure. But despite its viciousness we can recognize that it is at least an official recognition of the new economy which is confronting business, and to have the Government recognize the problem at all is to gain something.

"It is not our province, I repeat, to dictate our political economy. On the other hand, we can have great sympathy with the ultimate purposes of our Government in this direction. In a Democracy, public opinion seems to make it necessary that we go too far before we change our course, therefore we went too far in business before we made some reforms which were advisable. It is now necessary that we mark time awhile and consolidate the reforms which were necessary, and see that they are soundly administered.

"We must also realize that it is economic law that the people on the average can have no better plane of living than is justified by the quantity of goods produced by all of the people. In other words, have we not gone too far in cutting down production, and is it not better in the interests of all of our citizens to allow production to increase even if it is necessary to allow an increase in working hours?"

WHY MARBLE IS MARBLE

Marble, according to accepted technical definitions, is the finer varieties of granular and compact limestone, which, being of a closer grain, are susceptible to a superior polish, and are noted for their whiteness, or the beauty and variety of their colors. Marble received the name in derivation from the Greek word Marmour, meaning to shine or glitter, and this word was later corrupted to marmol, marmel, marble and marbre.

ARCHITECTS' BULLETIN

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The Convention at Santa Barbara

By HARRY MICHELSEN, A. I. A.

WHEN the State Association of California Architects was conceived, among its salient objectives was the desire to unify the architects into a strong mobile organization whose work would be devoted to the welfare of our profession as well as other phases of the building industry. To obtain a true architectural cross-section of the progress that has been made during the past several years, we may review the favorable achievements that have resulted from continuous effort.

At the recent Convention in Santa Barbara, a desire for a greater understanding between architects, the allied arts, and the construction industry was expressed. I believe that the architects have come to realize that they cannot work with maximum proficiency as individualists, that their activities are not limited to the design of structures, and consequently have gained recognition as creators and coordinators in the construction industry.

IMPORTANCE OF LEADERSHIP

Our activities in recent years have convinced me that we must continue to follow the avenue of leadership if we are to maintain the ground thus far covered, and, at the same time, take advantage of every opportunity to increase our capacity for understanding and cooperation.

Special emphasis should be placed upon the importance of cultivating knowledge and understanding of the other professions and divisions of the construction industry, in order to gain a greater appreciation of their attitudes and ideals, thereby eliminating unnecessary friction that may interfere with our progress.

The failure of the new Architectural Practice Act in the last session of the State Legislature was particularly disappointing, since it was defeated under the pretense of protecting the public from limited practices in the architectural field. It is unfortunate that the opponents of this Act were not brought to realize its value as a centralizing agency to coordinate the activities of the architects and the allied professions.

Our retiring president, Sylvanus B. Marsten, recommended that a small well-informed committee be appointed to make an investigation of the Act, adjusting any part that might be construed as an encroachment upon the rights of others, and, furthermore, to convey to the members of our Association its intended purpose, so that opposition will be in the minority when it again comes up for consideration.

This Act warrants every architect's support, and we are confident that its passage will be assured if Mr. Marsten's suggested method of procedure is followed.

PAYING MEMBERS

Due to a growing tendency to stabilize the membership in the Association, a recommendation was made at the Convention that it be limited to pay

ing members rather than the all-inclusive policy that now exists. This proposition will be analyzed during the coming year, and at our next convention will be acted upon whatever direction will have been agreed as the most effective to safeguard the integrity of the profession.

STATE WORK

We have worked diligently to divert California State work into the offices of architects in private practice, but, due to the Civil Service Laws which are a part of the Constitution, the awarding of contracts to professional individuals is ruled as a violation of the law, except where certain exemptions are provided. Resolutions were adopted that efforts be continued to repeal or adjust the interfering laws, so that the architects may participate in State work.

THE RILEY ACT

It is to be regretted that the regulations set forth by the Riley Act and intended to govern construction in private industry, due to improper enforcement in certain localities, has not been as effective as desired. Therefore, our Association considered it advisable to formulate a program which would encourage better enforcement in areas where sounder construction is essential.

Recently the Uniform Building Code, sponsored by the State Chamber of Commerce, was published and presented to the public and the construction industry. On account of the intrinsic value of this Code, it was determined to cooperate with the Pacific Coast Building Officials Conference, for the purpose of having them adopt certain parts or all of this Code, since it contains many features that lead toward sound and economical construction.

ADVERTISING

This age of organized salesmanship creates a need for a comprehensive advertising program for the architects, which, it was agreed, will be given serious consideration. If investigation proves that further development in this work is feasible, an effective method of presenting the architect to the prospective client will be devised.

Other items of importance were submitted and discussed, and will be worked out to beneficial advantage under the aggressive leadership of our new president, Ernest Weihe in the north, and Merrill Baird in the south, along with the new Executive Board of the Northern and Southern Sections of the State Association of California Architects.

HENRY ADAMS SCHOLARSHIP AWARD

The Henry Adams Scholarship for 1939 has been awarded to Professor Arthur P. Herrman of the University of the State of Washington. His convincing qualifications were established by letters of recommendation addressed to the Committee on Education. The amount of the Scholarship is $1,000, to be used in travel or study.

BOOK REVIEWS

EARTH'S GREEN MANTLE, by Sidney Mangham; Macmillan Company, New York City, N. Y. Price: $3.50.

In this book the author discusses the interrelationship between plants and their natural haunts. The varied aspects of plants and the influence which they exert seem in this book to be covered in a manner limitless. Here we have a volume devoted to a study of natural phenomena, the most interesting next to human life, popularly written, yet scientifically accurate. The author leads us to a realization of what we might expect were some catastrophe to suddenly wipe away all vestige of plant life from this world.

HAVE WE AN AMERICAN ART? by Edward Alden Jewell; Longmans, New York City, N. Y. Price: $2.75.

Here may be the answer to the question that has been asked countless times. Have we, as Americans, an art that we may call our own? An art founded on American cultural values and our own appreciation of our own art. The author from his wide and varied life as an art critic has a grasp of the world of art and an appreciation of our contribution to it.

In this book will be found a clarification and a record of our accomplishments in the realm of the fine arts. The conclusions reached by Mr. Jewell are surprising yet they are so sound they are indisputable.

BETTER BUSINESS LETTERS, by L. E. Frailey, B.A.; American Technical Society, Chicago, Ill. Price: $2.00.

To any business office this book is recommended as a valuable asset to those interested in the preparation and writing of sound business letters. The author is a man whose word is authority in the world of business correspondence. There are quiz questions and lessons at the end of each chapter, plus an excellent index.

BUILDING CODE OF CALIFORNIA; Edwin Bergstrom, Editor; Prepared for the California State Chamber of Commerce, San Francisco. Price $5.00.

A new volume of the building code, prepared through the contributions of the committees representing the American Institute of Architects, Northern and Southern California Chapters; the State Association of Architects (California); American Society of Civil Engineers, Northern and Southern California Chapters; General Contractors of San Francisco and the Southern California Chapter of the Associated General Contractors of America.

The work is based on accurate and detailed studies made by these contributors and represents a vast amount of research and painstaking work. As a guide and reference book this code will be indispensable to the architectural and engineering professions and building trades. It will very materially assist in clearing up obscure rulings governing building in California, and the adherence to the specifications herein contained should lead to better building and freedom from much unnecessary controversy.

LARGE SIZE TILE LENDS MODERN TOUCH TO HOME

FULLY TILED STALL SHOWER AND RECESS BATHTUB

EMPLOYMENT of the larger size of tile to lend modernity and to contribute to design, is exemplified in the residence of R. R. Stuart, Broadmoor District, San Leandro. Prior to occupancy, the dwelling, completely furnished, was inspected by thousands of visitors.

Broad use of quarry tile at front entrance and in patio gave enduring surface and afforded attractive contrast to the building's color and the various hues of flowers and lawn and shrubbery.

Tiling in the lavatory off the guest room was especially noticeable for its contribution to color and design of the small room. Here, in a room 3 feet, 6 inches by 6 feet, 9 inches, the 6 x 9 tiles set wainscot high were particularly effective. Kraftile's Carmel Yellow was used both for its attractive shade and for its lightness of hue. Flooring, the band, three-inch bullnose and the capping, asserted to be were set in El Dorado Rust.

A splendid job of tile setting was accomplished for this installation. Nowhere does it show to more advantage than in the bathroom off the master bedroom. Here two shades of green, Kraftile's Laguna and Seafoam, blended perfectly with the fixtures and the handsome wall paper. The darker Laguna Green was used effectively for flooring, baseboard and trim.

The baseboard was of 6 x 9's set vertical. In every other course, grout lines were joined with those of the flooring, a neatness easily attained by this size of tile which is asserted to be "architecturally correct."

Irwin M. Johnson, Oakland, was architect for the Stuart dwelling.

LARGE SIZE TILE USED EFFECTIVELY IN HOME OF R. R. STUART, SAN LEANDRO
IRWIN M. JOHNSON, ARCHITECT

FRONT ENTRANCE OF QUARRY TILE

COOPER UNION IN MOVE FOR BETTER LOW COST HOMES

HOUSES to sell for $4,000 to $7,000 are being designed by fifty students of architecture at Cooper Union. Housing in the United States will never be adequate until architects plan more and better houses for persons earning less than $5,000 a year, according to Esmond Shaw, assistant art director of the Cooper Union Art Schools, who is in charge of the student project.

"To design a good, small house at a reasonable cost is the most difficult problem in architecture," Mr. Shaw declared. "It is my belief that housing in the future will require more and more architects who can plan a satisfactory inexpensive home."

The house plan under consideration calls for a living room with a dining alcove adjacent to the kitchen, but not a part of it, a kitchen, two bedrooms, a bathroom, a one-car garage, five or six closets and front and rear entry. The house may be one story, one story and one-half, or two stories. If the students plan houses larger than one story, they are encouraged to include unfinished space in their design for one or two bedrooms and an additional bath—a big selling point, according to Mr. Shaw.

"The students are enthusiastic about the project because they feel that they are doing work which is worthwhile and because they are more or less familiar with the general type of house required," Mr. Shaw said. "They also realize the folly, which some architects do not, of trying to earn a living, when they graduate, by concentrating on the designing of houses for about eight per cent of the nation's purchasing power.

"The houses being planned at Cooper Union could be purchased on time for less than $50 a month, depending in which section of the country they are built. In the South, for instance, the cost would be about $4,000, while in the New York area it would approximate $6,000 or $7,000, these estimates to include the price of the lot and such items as the kitchen stove, refrigerator, and heating plant."

The area of the house is to be limited to 17,000 cubic feet. The construction is to be frame with an economical form of sheathing, or exterior covering, with an interior of plaster on rock lath, a type of low-cost plaster base. The students are urged to experiment with a "dry wall" finish on the interior, nailing wall board directly to the studs and thus eliminating the use of plaster. They are also encouraged to examine possible uses of the new phenolic resin bonded plywood for exterior finishing.

The hypothetical site for the house is "a level suburban lot somewhere in the Northeastern states." The size of the lot is given as 50 feet by 100 feet, with the 50 foot dimension facing the street.

The students will be engaged with the project for approximately three months, Mr. Shaw said. Their final efforts will be in the form of models, presentation drawings or working drawings. During the three months they will hear lectures on how to figure costs of wood construction and receive instruction on how to write the proper kind of specifications.

According to a list of suggestions prepared by Mr. Shaw to guide the students, the designs should include provision for a hood over the front door, a garage that is attached to the house, and an interior connection between house and garage.

The students have been advised by Mr. Shaw to examine the standards on minimum housing set up by the Federal Housing Authority. Stipulations requiring three foot corridors and stairs, proper bracing for the frame of the house, a kitchen opening directly on the dining room, stairways to open on hallways, and an eight foot clear ceiling height, will be some of the FHA regulations studied.

Although the designs may be experimental, it was pointed out by Mr. Shaw, any hodge-podge solutions will not be acceptable. In other words, he said, the plans will be either strictly experimental or in definite adherence to FHA standards.

WAR BENEFITS—YES AND NO

Eminent architects do not seem to agree on the probable benefits of the European War to the American building industry. Harvey Wiley Corbett, F.A.I.A. of New York says there will be no "boom." William Stanley Parker of Boston says the war will benefit building.

CORBETT

I distinctly recall a period of 25 years ago and the effect which war had on architecture. Architects were able in most cases to carry through the work already in hand, but very little of new value appeared. I believe the same condition will be true today with the possible exception of housing. There may be an increased movement in this field.

I believe architects, to stay in business, will have to tie themselves in with some sort of war work. I fail utterly to visualize private investors in large scale buildings undertaking long term investments under the present circumstances with material prices changing so rapidly.

PARKER

Whatever develops will be not a direct but an indirect result of whatever general business improvement may result from the war. This improvement will perhaps be affected by two sources. One is the new trade developed with other neutral countries whose trade with Germany has been interrupted and who will probably turn to our markets for their goods.

The other is trade with England and France so far as our action on the neutrality issue permits dealing with them in other than normal peace times.

Estimator's Guide

iving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

l prices and wages quoted are for San cisco and the Bay District. There may ight fluctuation of prices in the interior southern part of the state. Freight ge, at least, must be added in figuring try work.

—1½% amount of contract.

work—

mmon, $40 to $45 per 1000 laid, (according to class of work).
ce, $90 to $100 per 1000 laid, (according to class of work).
ck Steps, using pressed brick, $1.00 lin. ft.
ck Veneer on frame buildings, $0.70 sq. ft.
mmon f.o.b. cars, $14.00 at yard. Cartage extra.
ce, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

OW TILE FIREPROOFING (f.o.b. job)

2x12 in.	$ 84.00 per M
2x12 in.	94.50 per M
2x12 in.	126.00 per M

OW BUILDING TILE (f.o.b. job)
load lots.

2x5½	$ 94.50
2x5½	73.50

ing Paper—

y per 1000 ft. roll	$3.50
y per 1000 ft. roll	5.00
y per 1000 ft. roll	6.25
tkraft, 500 ft. roll	5.00
cord com. No. 7	$1.20 per 100 ft.
cord com. No. 8	1.50 per 100 ft.
cord spot No. 7	1.90 per 100 ft.
cord spot No. 8	2.25 per 100 ft.
weights cast iron, $50.00 ton.	
s, $3.50 base.	
weights, $45 per ton.	

rete Aggregates—

vel (all sizes) $1.45 per ton at bunker; delered to any point in S. F. County $1.85.

	Bunker	Delivered
sand	$1.45	$1.85
crete mix	1.45	1.85
hed rock, ¼ to ¾	1.60	2.00
hed rock, ¾ to 1½	1.60	2.00
ing gravel	1.60	2.00
gravel	1.45	1.85
sand	1.50	1.90

vered bank sand—$1.00 per cubic yard at nker or delivered.

	Bunker	Delivered
sand	$1.40	$1.80
s (Nos. 2 & 4)	2.00	2.40
pia Nos. 1 & 2	1.80	2.20
sburg plaster sand	$1.80 and	$2.20
Monte white	50c per	sack

NT (all brands, cloth sacks) $2.72 per bbl. r car; deliv. $2.90 per bbl., carload lots; than carload lots, warehouse or delivered, per sack. (Less 10c per sack returned, 2% Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery; over 100 sacks, $1.25; 2% discount 10th of month.

Forms, Labors average $40.00 per M.
Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.
4-inch concrete basement floor ..... 12½c to 14c per sq. ft.
Rat-proofing 7½c
Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.
Membrane waterproofing—4 layers of saturated felt, $4.50 per square.
Hot coating work, $1.80 per square.
Medusa Waterproofing, 15c per lb., San Francisco Warehouse.
Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.
Teams, $12.00 per day.
Trucks, $22 to $27.50 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.
Mosaic Floors—80c per sq. ft.
Duraflex Floor—23c to 30c sq. ft.
Rubber Tile—50c to 75c per sq. ft.
Terazzo Floors—45c to 60c per sq. ft.
Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	13/16x2¼" T&G	¾x2" T&G	⅝x2" Sq. Ed.
Clr. Qtd. Oak	$144.00 M	$122.00 M	$133.50 M
Sel. Qtd. Oak	118.00 M	101.00 M	106.50 M
Clr. Pla. Oak	120.00 M	102.00 M	107.50 M
Sel. Pla. Oak	113.00 M	92.00 M	99.50 M
Clr. Maple	124.00 M	105.00 M	

Wage—Floor layers, $10.00.
Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—
Double strength window glass, 20c per square foot.
Plate 75c per square foot (unglazed) in place, $1.00.
Art, $1.00 up per square foot.
Wire (for skylights), 40c per sq. foot.
Obscure glass, 30c to 50c square foot.
Glass bricks, $2.40 per sq. ft., in place.
Note—If not stipulated add extra for setting.

Heating—
Average, $1.90 per sq. ft. of radiation, according to conditions.
Warm air (gravity) average $48 per register.
Forced air, average $68 per register.

Iron — Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$36.00 per M
No. 2 common	29.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	26.00 per M
1x4 No. 2 flooring VG	60.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1"x4 and 6, No. 2 flooring	65.00 per M

Slash grain—

1x4 No. 2 flooring	$43.00 per M
1x4 No. 3 flooring	40.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.20 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded) 5/16" 3-ply and 48"x96"	$32.50 per M
"Plywall" (wallboard grade)— ¼" 3-ply 48"x96"	$38.50 per M
"Plyform" (concrete form grade)— ⅝" 5-ply 48"x96"	$110.00 per M
Exterior Plywood Siding— 7/16" 5-ply Fir	$ 90.00 per M
Redwood	$100.00 per M

Millwork—Standard.
O. P. $85.00 per 1000. R. W., $90.00 per 1000 (delivered).
Double hung box window frames, average with trim, $6.50 and up, each.
Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.
Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.
Screen doors, $3.50 each.
Patent screen windows, 25c a sq. ft.
Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.
Dining room cases, $8.00 per lineal foot.
Rough and finish about 75c per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.
For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work . . per yard 42c
Three-coat work . . per yard 60c
Cold water painting . . per yard 10c
Whitewashing . . . . per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch . . . . . $1.25 lineal foot
8-inch . . . . . 1.75 lineal foot
10-inch . . . . . 2.25 lineal foot
12-inch . . . . . 3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.60
2 coats, lime mortar hard finish, wood lath	.70
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	1.10
Ceilings with ¾ hot roll channels metal lath plastered	1.85
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4 inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.80
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.10
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.40

Plastering—Exterior— Yard

2 coats cement finish, brick or concrete wall $1.00
3 coats cement finish, No. 18 gauge wire mesh 1.50
Wood lath, $7.50 to $8.00 per 1000.
2.5-lb. metal lath (dipped) 17
2.5-lb. metal lath (galvanized) 20
3.4-lb. metal lath (dipped) 22
3.4-lb. metal lath (galvanized) 28
¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.50 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—
From $70.00 per fixture up, according to grade quantity and runs.

Roofing—
"Standard" tar and gravel, $6.50 per sq. for 30 sqs. or over.
Less than 30 sqs. $7.00 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Copper, $16.50 to $18.00 per sq. in place
Cedar Shingles, $8.00 per sq. in place.
Re-Coat, with Gravel, $3.50 per sq.
Asbestos Shingles, $15 to $25 per sq laid.

Slate, from $25.00 per sq., according to c and thickness.
Shakes—1x25" resawn . . . . . $11.50 pe
½x25" resawn . . . . . 10.50 pe
½x25" tapered . . . . . 10.00 pe
Above prices are for shakes in place.

Sheet Metal—
Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardw $1.75 per sq. ft.

Skylights—(not glazed)
Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural
$120 ton (erected), this quotation is average for comparatively small q tities. Light truss work higher. F beams and column work in large q tities $97 to $105 per ton.

Steel Reinforcing—
$80.00 to $120.00 per ton, set.

Stone—
Granite, average, $6.50 cu. foot in pl
Sandstone, average Blue, $4.00, B $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft place.

Store Fronts—
Copper sash bars for store fronts, co center and around sides, will ave 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc. — (See Dea
Asphalt Tile—18c to 2Bc per sq. ft. stalled.
Wall Tile—
Glazed Terra Cotta Wall Units (single fa laid in place—approximate prices:

2 x 6 x 12	$1.00 s
4 x 6 x 12	1.15 s
2 x 8 x 16	1.10 s
4 x 8 x 16	1.30 s

Venetian Blinds—
40c per square foot and up. Install extra.

THE BUILDERS' EXCHANGE OF SAN FRANCISCO STANDARD WAGE SCALI

For mechanics employed on construction work in the Bay Region. Effective September 1, 1937

CRAFT	Journeymen Mechanics
Asbestos Workers	$ 8.00
Bricklayers (6h-5d)	10.50
Bricklayers' Hodcarriers (6h-5d)	6.75
Cabinet Workers (Outside) (5d)	8.00
Caisson Workers (Open)	6.40
Carpenters (8h-5d)	10.00
Cement Finishers (8h-5d)	10.00
Cork Insulation Workers (8h-5d)	9.00
Electric Workers (8h-5d)	11.00
Electrical Fixture Hangers	8.00
Elevator Constructors	10.40
Engineers, Portable & Hoisting	9.00
Glass Workers (8h-5d)	9.68
Hardwood Floormen	9.00
Housesmiths, Architectural Iron (Shop) (8h-5d)	9.00
Housesmiths, Architectural Iron (Outside) (8h-5d)	10.00
Housesmiths, Reinforced Concrete or Rodmen (8h-5d)	10.00
Iron Workers (Bridge and Structural) Including Engineers (8h-5d)	12.00
Laborers, Building (8h-5d)	$ 6.00
Laborers, Common (8h-5d)	6.00
Lathers, Channel Iron (6h-5d)	9.00
Lathers, All Others	9.00
Marble Setters (8h-5d)	10.50
Marble Setters' Helpers (8h-5d)	6.50
Millwrights	9.00
Model Makers ($1.50 per hr-6h)	9.00
Modelers ($2 per hr-6h)	12.00
Model Casters	7.20
Mosaic and Terrazzo Workers (Outside)	9.00
Painters (7h-5d)	8.75
Painters, Varnishers and Polishers (Outside)	8.75
Pile Drivers and Wharf Builders	9.00
File Drivers' Engineers	10.00
Plasterers (6h-5d)	10.00
Plasterers' Hodcarriers (6h-5d)	7.50
Plumbers (8h-5d)	11.00
Roofers, Composition (8h-5d)	9.00
Roofers, All Others (8h-5d)	8.00
Sheet Metal Workers (8h-5d)	10.00
Sprinkler Fitters	10.00
Steam Fitters (8h-5d)	$
Stair Builders (8h-5d)	
Stone Cutters, Soft and Granite (8h-5d)	
Stone Setters, Soft and Granite	
Stone Derrickmen	
Tile Setters (8h-5d)	
Tile Setters' Helpers (8h-5d)	
Tile, Cork and Rubber (8h-5d)	
Welders, Structural Steel Frame on Buildings	
Welders, All Others on Buildings	
Dump Truck Drivers, 2 yards or less	
Dump Truck Drivers, 3 yards	
Dump Truck Drivers, 4 yards	
Dump Truck Drivers, 5 yards	
Dump Truck Drivers, 6 yards	
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	
3 yards	
4 yards	
5 yards	
6 yards	

GENERAL WORKING CONDITIONS

1. Eight hours shall constitute a day's work for all crafts except as otherwise noted.
2. Plasterers' Hodcarriers, Bricklayers' Hodcarriers, Roofers' Laborers, and Engineers, Portable and Hoisting, shall start 15 minutes before other workmen, both at morning and at noon.
3. Five days, consisting of not more than eight hours a day, on Monday to Friday inclusive, shall constitute a week's work.
4. Transportation costs in excess of twenty-five cents each way shall be paid by the contractor.
5. Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturdays (except Laborers), Sundays and holidays, from 12 midnight of the preceding day, shall be paid double time.
6. On Saturday, Laborers shall be paid straight time for an eight-hour day.
7. Where two shifts are worked in any twenty-four hours, shift time shall be straight time. Where three shifts are worked, eight hour's pay shall be paid for seven hours on the second and third shifts, allowing one-half hour for lunch.
8. All work, except as noted in paragraph 9, shall be performed between the hours of 8 a.m. and 5 p.m.
9. In emergencies, or where premises cannot be vacated until the close of business, men then reporting for work shall work at straight ... Any work performed on such jobs after ... night shall be paid time and one-half. ... four hours of overtime and double time ... after, provided, that if a new crew is emp ... on Saturdays, Sundays or holidays whic ... not worked during the five preceding ... such crew shall be paid time and one-ha...
10. Recognized holidays to be: New Year's ... Decoration Day, Fourth of July, Labor ... Admission Day, Thanksgiving Day, Chri... Day.
11. Men ordered to report for work, for wh... employment is provided, shall be entitl... two hours 'pay.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

7. FEED OILER

An unbreakable gravity feed oiler described in a broadside issued by Trico Fuse Manufacturing Company. Further details are available in company's new folder and catalog. The coupon will bring you all this portant data—clip and send in.

3. STEEL ALLOYS

Electromet Review, that interesting le paper put out by Electro Metallgical Company, is on hand and has ch to recommend it. There is always ws of interest to those wishing to ow something more of alloy steels d irons. Send in the coupon for ur copy.

9. NEW LIGHTING UNIT

Benjamin Electric Company anunces details concerning their new reamLiter" a lighting unit for the fluorescent lamps. There is comte information relative to performce and application and other perent details.

0. FOR THE AIR MINDED

Bulletin number 106 of the Copper d Brass Research Association is out d for the "air-minded" has some y remarkable photography of aero nes and much detail about copper d brass in the aviation industry. ese bulletins are very worthwhile d this is an exceptional one. Send your copy by using the coupon.

1. ROPE CLAMP

"Safety, Security and Simplicity" e embodied in the Safe Line Wire pe Clamp, a new and excellent le gadget described in a broadle issued by National Production ompany.

2. MERCURY ARC LIGHT

A new mercury-arc light for use in ue printing machines is soon to make appearance on the market, accordg to information received from the ency handling the publicity for the nufacturers. Detailed descriptive tter is ready and will be available r those interested. Send in the upon.

303. MAINTENANCE COSTS

"How To Cut Maintenance Costs" is the title of a pamphlet received from the Flexrock Company. Their data is generally interesting and this new sheet has some information of value for flooring people and factory maintenance executives.

304. VAPOR-SEAL SHEATHING

The Celotex Corporation has a deal of new information out on their "Vapor-Seal Sheathing." Diagrams show just how it is used and where it goes. Send for this interesting material by using the coupon below.

305. MOTORS

We greet a newcomer to this page —The Louis Allis Company with their brochure on Adjustable Speed Motors. This new brochure shows some excellent cuts of speed motors and has plenty of descriptive text. Send for your copy.

306. TYPE-WALLS

Johns-Manville have a brochure dealing with Trasnite-Universal Type-Walls. Specifications and diagrams aid the text in making a very comprehensive and descriptive booklet.

307. VENTILATION

American Machine and Metals, Inc., the De Bothezat Ventilating Equipment Division, have put out a most complete booklet on their "Axial Flow" ventilating sets. Specifications, schematic drawings, plates and complete cataloguing make this a very useful pamphlet. The coupon will bring a copy without delay.

308. WATER COOLED FURNACE

A thirty two page bulletin describing and illustrating water cooled furnaces is ready for issuance by the Babcock and Wilcox Company. All details are given and the bulletin is completely illustrated. The coupon below will insure your having a copy.

309. STEEL AWNING

The American Rolling Mill Company announce the placing on the market of a Venetian-Type Awning made entirely of steel. This company will be pleased to give full details through descriptive matter to those interested. Clip and send in the coupon and it will bring you a copy of the data on a very interesting product and one that may revolutionize the awning field.

310. ELECTRIC OUTLETS

National Electric Products Corporation have some data on their new "One Angle Socket" which is closely tied-in with their recent product—a "Plug-In" Strip Line. Full details may be obtained by use of the coupon below.

311. SHOWER CABINET

A shower cabinet de luxe is described in a folder issued by the Stainless Metal Products of Oakland.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
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San Francisco, Calif.

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298 ☐		305 ☐
299 ☐		306 ☐
300 ☐		307 ☐
301 ☐		308 ☐
302 ☐		309 ☐
303 ☐		310 ☐

311 ☐

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Street .....

City ..... State .....

Standards of Practice of American Institute of Architects

1. The profession of architecture is an old and honorable profession and its successful practice requires imagination, sound judgment, a long training in the art of design and the science of construction and related matters, ability to apply them practically and economically, and scrupulous integrity. Its practitioners should command the confidence and respect of their fellow practitioners, of their clients and all who contribute to the building operations, and of the communities in which they reside and practice.

2. The profession is one of the factors of the building industry, and for its livelihood depends on those who build, but of all factors of the industry it is unique, in that it does not obtain its livelihood from the sale of labor or materials of construction, but from fees for rendering professional services. Such services are personal services, founded on mutual trust between those who render them and those for whom they are rendered, and on the principle that the best interest of those to whom the services are rendered is paramount.

3. Advice and counsel constitute the services of the profession. Given in verbal, written, or graphic form, they are normally rendered in order that buildings with their equipment and the areas about them, in addition to being well suited to their purposes, well planned for health, safety, and efficient operation and economical maintenance, and soundly constructed of materials and by methods most appropriate and economical for their uses, shall have a beauty and distinction that lift them above the commonplace.

4. It is the purpose of the profession of architecture to render such services from the beginning to the completion of a project.

5. The fulfillment of that purpose is forwarded or retarded every time an architect performs an architectural service. If he renders the highest quality of service he is capable of giving, he enhances the importance and usefulness of the profession; if he fails to do so, he depreciates them and discredits the purposes of the profession. Particularly should his drawings, specifications, and other documents be complete, definite and clear concerning his intentions, the scope of the contractors' work, the materials and methods of construction to be used therefor, and the conditions under which the construction work is to be completed and paid for.

6. Architects should unite in fellowship with the other members of the profession in their professional organizations, and do their full share of the work of those organizations. They should accept mentorship of the young men who are entering the profession, leading them to a full understanding of the functions, duties, and responsibilities of architects. They should inspire the loyal interest of their employees, providing suitable working conditions for them, requiring them to render competent and efficient services, and paying them adequate and just compensation therefor. They should seek opportunities to be of constructive service in civic affairs, and, to the best of their abilities, advance the safety, health, and well-being of the community in which they reside, by promoting therein the appreciation of good design, the value of good construction, and the proper placement of structures, and the adequate development and adornment of the areas about them.

7. Every architect should, as a member of that profession, do his full part to forward the objectives and maintain the dignity and solidarity of his profession. It is incumbent on him, in the conduct of his practice, to maintain a wholly professional attitude towards those he serves, towards those who assist him in his practice and in giving form to his conceptions, towards his fellow architects and the members of other professions and towards the practitioners of other arts, and to respect punctiliously the hall-marks that distinguish professional practice from non-professional enterprise.

8. The hall-marks of a profession can not be particularized in any document, but certain procedures by an architect would be distinctly inimical to the profession of architecture, such as:

Offering his services on any basis other than that of competence and experience;

Supplanting or attempting to supplant another architect after definite steps have been taken by a client toward employing the other architect;

Engaging in the business of construction contracting during his practice as an architect;

Investing in any enterprise or having any business relations or personal interests that may tend to discredit his freedom to act impartially and independently in the best interests of those who depend on his judgment and acts;

Making knowingly any deceptive statements to his client of the probable cost of his building project or of the time of its completion;

Making any guarantee of the cost or the time of completion of any project, or of the performance of any construction contract;

Accepting or taking compensation, fees, or other valuable considerations in connection with his practice from others than his clients;

Giving prejudiced advice; making unjust decisions or unwarranted interpretation of documents prepared by him; or failing to guard the interests of all engaged in the construction work, that full value under the contracts shall be given and received;

Permitting the publishing of obtrusive or ostentatious advertising of his practice or achievements;

Maliciously injuring the professional reputation, prospects or practice of a fellow architect;

Taking any part in any architectural competition any condition of which The Institute deems contrary to the best interests of any of those concerned, the public, or the profession;

AMAZING GROWTH OF PLASTICS

BORN in the test tube of Science, bred in the Research Laboratory, plastics have grown with amazing swiftness to command a high place in modern industry. Just what are they? Why, plastics are the materials that give color and permanence to scores of familiar objects handled and used every day. Things like sleek, lustrous radio housings that make possible high reception quality at comparatively low cost; handles for pots and pans that never get too hot to touch; long-wearing table tops that are impervious to cigarette burns and beverage stains; fashionably correct costume jewelry and scintillating faceted stones that vie in color and sparkle with far more precious gems; and a host of other convenient, useful and decorative appurtenances from toothbrush handles to colored telephones and lampshades.

Plastics make possible the protection of safety glass. They take the noise out of automobile mechanisms, and dress up the interior with colored steering wheels and instrument panel handles and knobs. Because of plastics, heavy industrial machinery in paper mills, steel mills, rolling mills, etc., operates more quietly and with fewer costly shut-downs. Indeed, wherever plastics are used —they do the job required and do it better usually than it was ever done by the materials they replace.

A convincing proof of this statement is the tremendous increase in the production of plastic materials. According to the 1937 census, approximately $78,000,000 worth of plastics and plactis products were produced. That was an increase of about 55 per cent over figures reported for 1935 and more than 200 per cent over those recorded for 1933. In 1939 the amount produced reached $100,000,000, an increase of nearly 33 1/3 per cent over 1937. These figures apply only to molded, cast and laminated plastic products which represent but a fraction of the entire volume. Generally speaking, the plastics industry also embraces the resins used in the production of considerably more than half a billion dollars worth of varnishes and lacquers, textiles (particularly rayon), films, safety glass, and so on.

As a definite indication of plastics progress just during the past year, the Fourth Annual Modern Plastics Competition, recently concluded, reveals literally hundreds of new uses for these man-made materials, many of which have never been shown before.

Plastics often have been considered as substitute materials. For example, an entirely new method of spinning rayon yarn has been worked out by the International Rayon Company, Painesville, Ohio, because of plastics. It took six years of experimentation to develop a plastic compound which would withstand the hot, corrosive liquids in which spinning reels must run to make the new process possible. This is accomplished by means of a molded Durez, threaded, advancing reel of most complex construction, operated through the use of laminated plastic gears and collars which

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BY CHARLES G. MURRA
President of Paramount Built-In Fixture Co.

The science of kitchen design begins with an understanding of the five "work Centers" of kitchen routing—the refrigerator or cooler, the range, the sink, the storage spaces and work counter, the point at which raw materials begin their conversion into the finished product.

The arrangement of these "work centers" which we call the "circle of work" is a formula which may be applied to any kitchen. Simple as this "formula" may seem, it has taken years of study and practical experience in designing to produce standardized units which can be adapted to the varied specifications of thousands of kitchens. The housewife, the builder, the architect, have been questioned and their thoughts and suggestions have been carefully studied and incorporated in the manufacture of Paramount Built-In Cabinets. Many architects have availed themselves of our kitchen planning service, which gives expert suggestions and layouts in kitchen designing.

Paramount cabinets are destinctive in design and construction and have embodied the latest improvements and refinements in their manufacture.

The Paramount Built-In Fixture Company has published a catalogue for architects. A copy can be had by writing to the —

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Arthur Brown, Jr., Architect

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are also able to withstand the corrosive bath. The twisted yarn travels at a terrific speed and winds on bobbins, throughout the drying process, which are made of the same molded plastic material. By finding a plastic that would stand up under these exacting conditions and remain perfectly smooth at such rapid speeds, it has been possible to reduce from days to minutes the time required to completely process rayon yarn.

Another exciting instance of how plastics have stepped in to replace steel is shown in a new shoe stitching machine head developed for United Shoe Machinery Corporation of Beverly, Mass., by the Plastics Department of General Electric Company, Pittsfield, Mass. The combined processes of laminating and molding graphite impregnated phenolic material has resulted in practical elimination of noise and vibration, reported reductions of 80 per cent in total cam weight, 30 per cent in cam installation cost and 50 per cent in horse power required, along with an increase of 200 per cent in the speed of the machine.

The decorative and structural qualities of plastics are also demonstrated convincingly by the vast installation of Formica in the new annex to the Library of Congress, at Washington, D. C. Building for permanence and efficiency of operation, Pierson & Wilson, architects, collaborating with David Lynn, architect of the Capitol, specified this plastic material throughout the building wherever exposed surfaces were subject to abrasion through constant cleaning and use. More than 50 miles of book shelves were surfaced with this long wearing material, as well as table tops, delivery desk tops, chair rails, door trim, telephone booths and corridor paneling. A soft, cool shade of green was especially developed with a Morocco finish for this installation and joints are concealed by cast aluminum strips and cornices. The reason for the choice of Formica was its resistance to weak acids and alkalies used in cleaning and because its surface, which is not applied, will never need to be renewed.

HOLC APPRAISERS TO BE SCHOOLED

The nation's appraisers—the men who set the value on properties, determine the basis for buying and selling prices, and forecast the growth and decline of neighborhoods—have been offered a post-graduate course in their profession.

It will be a brief one, but all the improved procedures and practices evolved in training thousands of appraisers in the $3,000,000,000 operations of the Home Owners' Loan Corporation, involving more than a million properties, will be included in the curriculum, according to Donald H. McNeal, Deputy General Manager in charge of Appraisal and Reconditioning for the Corporation, Washington, D. C.

Three day schools will be held in every state where sufficient interest is shown in the program, according to Mr. McNeal. For the past several months, HOLC experts have made an intensive study and research

into appraisal data approved both within and outside the Corporation, and translated them into a series of lectures and discussions. Technical conferences have been held in several cities and produced such constructive results that it was decided to schedule them throughout the country.

"The primary purpose of the conferences will be the instruction of HOLC appraisers," said Mr. McNeal, "but there are thousands of others who will get concrete benefits from the information at our disposal. Experts for savings and loan associations, banks, and representatives of real estate operators will be welcome.

"The broad basis of the course obviously is to help appraisers to estimate correctly the value of property, set forth their findings in an intelligent manner, and clearly justify their conclusions. We believe it will prove of value, for the vast experiences absorbed in the last chaotic decade in the real estate field, the upheaval in real estate values, the changing conditions, have radically revised appraisal procedures.

"The HOLC naturally has played an important part in crystallizing various ideas and methods into a definite school of thought; it not only has sought to evolve practical approaches to value and clearer concepts of value, but has devised a complete and uniform method of reporting and recording appraisal information. Wherever its methods are explained to appraisers, we find them enthusiastically approved.

"The conferences we are planning will be as broad as possible. They will include explanations of methods of estimating reproduction costs; calculating various forms of physical, functional and economic depreciation; a program for analysis of local neighborhood conditions and trends; demonstration of the use of the capitalization approach, and the relation of price to value.

"The principles evolved in HOLC appraisals are applicable to all operations in the real estate and mortgage field. We feel the independent appraiser can get just as much out of our conferences as employees of the HOLC and we believe the Corporation, as a public service, should make available to the entire profession all the information and techniques it has developed."

No definite dates have been set for any conference, Mr. McNeal said, but HOLC regional and state managers will be contacted at once by Asa Groves, chief of the appraisal section, who is in direct charge of the program, notices concerning which have been sent to the 12 regional banks of the Federal Home Loan Bank System, to determine if they would be interested in sponsoring conferences on behalf of home-financing institutions.

SARATOGA OFFICE BUILDING

A physicians' office building has been planned for Dr. O. L. Rosasco at Saratoga by Ralph Wyckoff, architect, of San Jose. It will be one-story frame and stucco, and will cost approximately $6,500.

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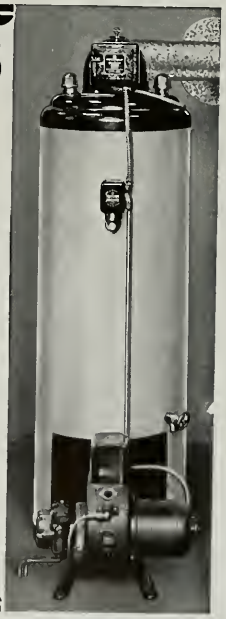

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SIMPLIFIED PRACTICE, COARSE AGGREGATES

The Division of Simplified Practice of the National Bureau of Standards has announced that printed copies of the first revision of Simplified Practice Recommendation R163, Coarse Aggregates (crushed stone, gravel, and slag), are now available. This revision, covering sizes of coarse aggregates and their uses, is identified as R163-39.

As originally promulgated in 1936, the recommendation carried two groups of sizes with the same overall range but with different intermediate size ranges. The Joint Technical Committee of the mineral aggregates associations, in submitting that plan, recognized the disadvantage of having two groups, but pointed out that when wide acceptance of the recommended sizes had been obtained, an effort could be made to consolidate the two groups. As a result of experience gained since 1936 the standing committee, in the present revision, achieved the desired consolidation of sizes into one group, and thus effected a net elimination of 12 sizes. The revision, like the original, comprises primary sizes and their combinations or modifications, but closer tolerances have been fixed for the lower limits of each size. One size was added to meet a growing demand for fine seal construction for surface treatment of airports and for other surfaces requiring a fine seal material.

Copies of this recommendation may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents each.

FRIANT DAM CONTRACT APPROVED

Official notice to proceed with the construction of Friant Dam has been issued by the United States Bureau of Reclamation to the Griffith and Bent Company, successful bidder.

As designed by Federal reclamation engineers, Friant Dam will be the fifth largest masonry dam in the world, its concrete mass totaling 1,850,000 cubic yards. The dam will create a 15-mile reservoir with a capacity of 520,000 acre-feet to be operated for supplemental irrigation and flood control in the San Joaquin Valley.

Secretary of the Interior Harold L. Ickes, Governor Culbert L. Olson, and Commissioner of Reclamation John C. Page were the principal speakers at the ground breaking ceremonies November 5.

The Griffith-Bent bid of $8,715,000, covering all labor and equipment for the construction of Friant Dam, was the lowest of five offers received by the Bureau of Reclamation at its Sacramento office September 14. The general contract was awarded by Secretary Ickes on October 9, but papers had to be signed and $5,000,000 in bonds posted before the formal "Go" signal could be released.

CALIFORNIA CERAMICS

The Second California Ceramics exhibition, now on display at the San Francisco Museum of Art, is a striking proof of the ability with which California

artists handle the 4,000-year old medium of pottery.

Like last year when the Museum presented its first all-California Ceramic Exhibition to San Francisco, the beholder will notice those qualities of highly personal expression which characterize most of the works.

In the pieces of Glen Lukens the trend of California ceramics towards original treatment and technical perfection find their most happy expression. Lukens' plates and bowls are outstanding in their harmonious correlation of design and color pattern. They are beautiful in the true sense of the word.

The show, circuited by the Western Association of Art Museum Directors, is a vital manifestation of an art manner which is taking a leading place in contemporary American art.

CHANGE OAKLAND FIRM'S CONTRACT

Secretary of the Interior Harold L. Ickes has announced approval of an order for change in the contract with the Columbia Construction Company, Inc., of Oakland, by which that company will transport approximatly 10,100,000 tons of sand and gravel for Shasta Dam concrete to the damsite over a belt conveyor 9 miles long.

In approving the order for change, Secretary Ickes said the Bureau of Reclamation estimated that the adaption of the belt conveyor to the use intended would result in a saving of approximately $250,000 to the United States and other advantages in the construction of Shasta Dam.

Belt conveyors have been used previously to transport such materials. A conveyor of this type, although much shorter, is moving all the sand and gravel going into the concrete at Grand Coulee Dam on the Columbia River in Washington. The longest belt conveyor now in use, however, is about 4½ miles in length compared with the nine-mile conveyor to be built at Shasta Dam.

The Columbia Construction Company had received the contract, on its bid of $4,413,520, for supplying aggregates to be used in the construction of Shasta Dam, now being built by the Bureau of Reclamation in the canyon of the Sacramento River north of Redding. It is building a screening and washing plant on a tract a mile east of Redding and nine miles from Coram, the station at which the aggregate is to be delivered to the Pacific Constructors, Inc., contractors building Shasta Dam.

The belt conveyor will be designed to deliver aggregate at the rate of approximately 1,000 tons per hour.

JURY OF FELLOWS

Frederick H. Meyer of San Francisco is chairman of the Jury of Fellows of the A.I.A. which will hold its next meeting in Washington, D. C., some time prior to April 5, 1940, for the purpose of considering the qualifications of corporate members whose nominations for advancement to fellowship are now on file.

ERNEST J. KUMP, SR.

Ernest J. Kump, whose school work is well known throughout California, passed away at his home in Fresno, where he practiced his profession for many years, Sunday, November 12, following a heart attack. Mr. Kump had not been well for some time. He was a native of San Jose but had spent most of his matured life in Fresno. At one time he was associated with Arthur Johnson and as senior member of this firm designed many outstanding school buildings in Fresno County and its environs. Ernest Kump, Jr., a son, is a practicing architect in Fresno.

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BUILDING FOR OCTOBER

(Concluded from Page 51)

during the month the total was $408,360, as against $430,510 in September. Classification of the three major divisions with totals of the more important items in each, follows:

Plans in Preparation

Apartments	$ 2,040,000
Residences	37,000
City, County and State	443,000
Schools and Colleges	1,132,000
Theaters	120,000
Churches	70,000
Stores	43,000
Industrial	174,000
	$ 4,059,000

Projects Out For Bids But Not Awarded

Apartments	$ 1,677,000
Residences	127,000
City, County and State	133,400
Government	17,421,828
Schools and Colleges	946,983
Churches and Theaters	61,405
Stores	104,000
Industrial	260,000
	$20,731,616

Contracts Awarded

Apartments	$ 110,000
Residences	408,360
City, County and State	565,339
Government	6,089,830
Schools and Colleges	302,301
Churches, Theaters and Misc.	345,800
Office Buildings	125,000
Stores	346,420
Industrial	419,500
	$ 8,712,550
Grand Total	$33,503,166

CHAIN STORE REMODELING

Chain store companies have spent a total of $126,159,914 for remodeling old stores and constructing new ones this year, or 12.2 per cent more than in 1938.

This expenditure indicates progress in modernizing stores rather than expansion in number of stores operated by the chains. The number of new stores opened equals 4.5 per cent of the total number in operation but this includes relocations and replacements, making no allowance for the number of stores closed this year. The total number of chain stores now in operation is somewhat smaller than the number in operation a year ago. The number of old stores remodeled in the year is equal to 10.7 per cent of all chain stores in operation.

SEALED BIDS

Sealed Bids for the furnishing of all labor, materials, transportation, tools and equipment for the construction and completion of the Industrial Laboratory Unit, Auditorium Building and Solvents Storage Building at the Western Regional Laboratory on the South side of Buchanan Street between the Southern Pacific Railroad right of way and Taylor Street, Albany, Alameda County, California, for the Bureau of Agricultural Chemistry and Engineering, U. S. Department of Agriculture, will be received until 2:00 P. M., E.S.T., Tuesday, December 5, 1939, and then publicly opened. The work will consist of construction and completion of a nineteen (19) bay Industrial Laboratory Unit located at the rear of the west side of the Administration Unit now under construction, will be four stories in height and attic approximately 65'-0" x 307'-0" by 50'-0" high of structural steel framing, reinforced concrete footings, columns and slabs, concrete wall construction and steel sash; built-up roofing, rigid insulation; permanent fixed partitions of removable wire mesh grille and guard rail with decks of subway grating at the second floor level alternating in 13 bays; each of the other alternate bays will be adjustable balconies; traveling crane. The auditorium building will be located in the court on the axis of the Administration Unit between the Chemical and Industrial Laboratory Units; will have a seating capacity of 400; approximately 54'-0" x 116'-0" by 30'-0" high; terrazzo, tile, wood and linoleum floors; wall board wainscots; plaster walls and ceilings; sprinkler system and the necessary plumbing, heating and electrical connections and required equipment. The Solvents Storage Building will be approximately 16'-0" x 26'-0" and 10'-0" in height; a skylight approximately 10'-0" x 18'-0". Award of the contract will be made only to a contractor who can show sufficient experience, financial resources, and who executes performance bond of 100% of cost and payment bond of 50% of cost, to insure the satisfactory installation of the work contemplated. A copy of drawings and specifications may be examined free of charge at the office of the Chief, Division of Purchase, Sales and Traffic, Room 1870 South Building, U. S. Department of Agriculture. The drawings and specifications may be had upon application to the Chief, Division of Purchase, Sales and Traffic, U. S. Department of Agriculture, Washington, D. C., on deposit of $50.00 per set. Checks must be certified and made payable to the Treasurer of the United States. Reference must be made to U.S.D.A. No. 7230. If drawings in possession of unsuccessful bidders are not returned to and received by the Bureau of Agricultural Chemistry and Engineering, U. S. Department of Agriculture, Washington, D. C., within 60 days after bids are opened, the deposits will be forfeited to the Government.

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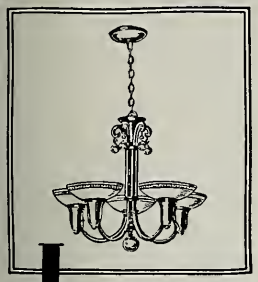

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ROUTE FOR PUMPING SYSTEM

A west side high line canal extending over 10 miles from the vicinity of Stockton in San Joaquin County to Mendota in western Fresno County, has been adopted as the route of the San Joaquin Pumping System, a major feature of the Central Valley Project.

The selection was made after an extensive two-year investigation of several alternative locations, including high lines on both the west and east sides of the northern San Joaquin Valley and through routes approximately paralleling the San Joaquin River. As originally proposed in early plans for the Central Valley Project, the San Joaquin Pumping System was contemplated as a series of river pools with the water to be moved upstream by pumping over a series of low dams.

On the basis of the extensive field studies by Bureau of Reclamation engineers, involving the relative costs of construction, quantity and quality of the water supply, and costs of power for pumping, the office of Chief Engineer R. F. Walter in Denver, Colo.,

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has ordered that final surveys from now on be confined to a west side high line. This route will preserve the existing river channel, thereby maintaining the valley's natural drainage condition.

COLLEGES TEACH HOUSING

Housing has found its way into the schools. Letters to USHA from over 400 institutions reveal that 133 colleges and junior colleges either teach housing courses or have courses relating to housing.

Of those institutions listing no courses, several indicated that plans are now under way to include housing in next year's curriculum. Many schools that do not have specific housing courses point out that courses in architectural design, sociology, building construction, and home economics include instruction in housing.

TEXAS PROF. WRITES BOOK

A University of Texas professor's text for collegiate draftsmen, hailed by W. R. Woolrich, engineering dean of the University, as "best book of its kind in America," is being used by American colleges for the first time this fall.

The 299-page volume, Engineering Descriptive Geometry, streamlines the teaching of drafting fundamentals through elimination of many details now regarded as useless but still taught in older works. The author is C. E. Rowe, University professor of drawing.

Hugo Leipziger, one of Europe's outstanding young architects in the large-scale low-cost housing field, has become a member of the University of Texas department of architecture.

LONG BEACH DRAFTSMEN

Affiliated with the Southern Section, State Association of California Architects, the Long Beach Draftsmen's Club meets weekly to carry on a rather ambitious program. Merrill W. Baird and Robert H. Orr, representing the State Association, were guests at the September 11th meeting when the topic was: "How can the draftsman obtain more regular employment and prevent the encroachment of others into the architectural field."

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HOME FINANCING TODAY

Payments of approximately 20 cents a day for each $1000 of the cost of construction now will pay for a new built-to-order home under the new regulations and reduced interest on FHA insured mortgages, which became effective last month, according to D. C. McGinness, district director of the Federal Housing Administration in Northern California.

With the interest rate sliced from five to a maximum of 4½ per cent, it was declared that payments of $5.97 a month per $1000 of an insured mortgage covering construction of a new home will pay in full the principal, interest and mortgage insurance premium.

"These undoubtedly are the most favorable terms ever available for home financing," said Mr. McGinness. "The average mortgage insured on new homes in this district, built under FHA inspection from approved plans and specifications, during the first half of this year, approximated $4000.

"Under the new regulations which make a one-half per cent reduction in interest rate, small homes now may be built on terms as low as 10 per cent down and monthly payments of $5.97 per $1000 borrowed. Hence, payments averaging $23.88 a month, or about 80 cents a day, will completely pay off a $4000 mortgage over a 25-year period.

"Another feature of this form of home financing is that the borrower never is required to refinance the loan, a costly and uncertain procedure necessary every three to five years under old style short-term mortgages. The FHA insured mortgage system also gives the buyer every possible protection toward safeguarding his investment in a home, such as property appraisal, desirability of location, expert review of plans and specifications, and periodic inspections while the house is under construction."

It was pointed out that by increasing the payments slightly less than three cents a day for each $1000 borrowed, over the amounts mentioned above, an insured mortgage would be fully paid off in 20 years. Payments of $26.96 a month, it was

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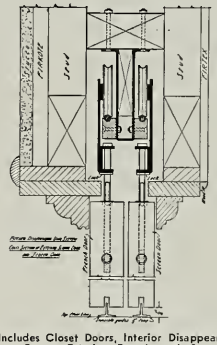

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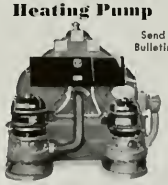

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will find ARCHITECT AND ENGINEER continuing its march towards a greater magazine of Western Architecture for Western needs.

MARK DANIELS will edit one of the early 1940 issues, gathering together such material he thinks architects wish to find in an architectural magazine. Mr. Daniels has designed some notable structures in the past few years, and his experiences with the building industry should make interesting reading. Mr. Daniels' timely "Running Fire" is well known to ARCHITECT AND ENGINEER readers.

REDWOOD

a California industry that has become a world industry—will be pictured and described in its many ramifications of usefulness in an all-redwood issue. Experienced writers will unfold new and practical developments in the use of this material for building construction. The Redwood Number will come early in the spring.

SCHOOLS

a number that will be eagerly sought by architects who specialize in this class of work. Great strides have been made in school architecture in recent years, particularly with regard to lighting facilities. Other new features, such as out-door classrooms, loud speakers, radio equipment, air conditioning, etc., will be discussed by competent writers. The illustrations will show a wide variety of school buildings, beginning with the small district school of one or more rooms and ending with the many-unit high school and junior college groups.

stated, would completely pay off a $4000 mortgage in 20 years, including principal, interest and mortgage insurance premium.

Added to these monthly payments would be one-twelfth of the annual taxes and a like percentage of the annual fire insurance premium.

ARCHITECTURAL LIBRARIES

Architectural libraries have a specialized job to do in the world. What they contain is chosen to furnish inspiration to the designer, to guide and assist the layman, to enrich the historian of art, and to give the technician the material he needs. With such a task, the architectural library must possess works of many different kinds and materials of many different sizes and types. It is bound also to be used by many different types of readers. All of these things will affect its administration, its personnel, and its methods. . . . Moreover, architecture touches life in so many ways that an architectural library is often called on to serve the ordinary cultivated layman, and must be organized to direct him and give him the information and the illustrative matter which he seeks. —Exchange.

CELOTEX APPOINTMENT

The appointment of Jack W. Hussey as manager of gypsum sales is announced by Marvin Greenwood, general sales manager of The Celotex Corporation, Chicago, Illinois.

Mr. Hussey came to the corporation in 1937 and because of his experience and knowledge of the gypsum business he was soon assigned to forming plans for the sale of gypsum products. The corporation entered the gypsum market in April when it acquired the business and assets of the American Gypsum Company at Port Clinton, Ohio.

Mr. Hussey brings to his new position fourteen years of successful merchandising experience in the building materials industry. In addition to this broad background he was a technical service manager of the Universal Atlas Cement Company for eight years, then owned and operated the Jack W. Hussey Construction Company of St. Louis, Missouri for four years.

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FORTY FEDERAL BUILDING PROJECTS

More than 40 Federal building projects have been completed in Washington by the Pubilc Buildings' Administration of the Federal Works Agency from 1933 to September of the current year, according to official figures recently released. This construction, all of which was done under private contracts, ranges from a $2,-881 repair job for the Agriculture Department to the construction of the $13,000,000 Department of the Interior Building.

Among the major construction jobs completed within the past six years are the Bureau of Engraving and Printing Building, $6,325,000; Federal Trade Commission Building, $3,761,-000; Government Printing Office Warehouse, $1,325,000; Internal Revenue, $1,948,000; addition to the Procurement Division Building, $1,-824,000, and the extension to the Archives, including the installation of book and document stacks, $3,610,-000.

Construction jobs involving smaller expenditures in the District of Columbia include animal houses at the National Zoological Park, reconditioning of equipment at the Treasury Department, and the repair and improvement of other Federal structures.

In addition to the completed projects, the Public Buildings Administration has the following projects under contract:

Additions to the Bureau of Standards, $355,400; base for the Gallatin Statue, $10,000; General Federal Office Building, $3,500,000; Government Printing Office Annex, $5,000,000; Procurement Division Building (Air Conditioning), $12,000; Public Health Service (Landscaping), $20,000; and, biggest contract of all, the Social Security and Railroad Retirement Board Building which is to cost $14,-250,000.

Among the projects "in drawing stage" is the War Department Building to be erected at a cost of more than $10,000,000; and "in site and survey stage" is the National Zoological Park Restaurant, $?0,000.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912 AND MARCH 3, 1933.

Of the Architect and Engineer, published monthly at San Francisco, Calif., for October 1, 1939.

State of California } SS.
City and County of San Francisco }

Before me, a notary public in and for the state and county aforesaid, personally appeared L. B. Penhorwood, who, having been duly sworn according to law, deposes and says that she is the Business Manager of The Architect and Engineer, and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (if daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, The Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

Editor, Fred W. Jones, 68 Post St., San Francisco, Calif.

Managing Editor—None

Business Manager, L. B. Penhorwood, 68 Post St., San Francisco, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

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L. B. Penhorwood, Business Mgr.

Sworn to and subscribed before me the 28th day of September, 1939.

(Seal) MARY D. F. HUDSON
Notary Public in and for the City and County of San Francisco, Calif.

(My commission expires Dec. 22, 1940.)

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December, 1939

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RUNNING FIRE

by MARK DANIELS, A.I.A.

Stability

In ever-changing Europe it is pleasant to find evidence of steadiness. When Matteo Sandona, well known and well liked portrait artist of San Francisco, returned to Italy after a forty year absence, his first thought was to visit his old home. On knocking at the front door and explaining the purpose of his visit, the old lady answering his summons broke into excited conversation and many exclamations, finally seating him ceremoniously in the hall and rushing up the stairs. She reappeared with another old lady—the two had been Matteo's landlady and housekeeper, in the same house, when he had left Italy forty years before.

But this stability was not carried out in Matteo Sandona's name. Matteo's grandfather was called San Dona, but with American efficiency and disregard of the past, he decided to combine the two names to Sandona. This, however, wasn't the end of the troubled nomenclature. In America, Matteo found his name mispronounced by the ma'ority of his friends. The accent is invariably placed on the "do" when it should be on the "na." Fortunately, I know him well enough to use the Matteo—and I thank my stars that we Californians do not try to pronounce San Jose in the same manner we do Sandona.

* * *

Matters of Record

John P. Irish, famous attorney now dead, always wore a stiff shirt and a stiff collar. It made no difference whether he was dressed for the opera or a walk. But he never wore a tie—in its place was a large gold collar button. . . .

Whether intentional or not, the renowned Liberty Bell at Independence Hall has a glaring misspelling. Pennsylvania is as follows: PENSYLVANIA. Historians give two solutions; one, that there was not room for the extra "n," and the other that there were only moulds enough to fit the letters actually used. Maybe the caster didn't know of William Penn—maybe he thought it had something to do with writing. . . .

Juanita Miller, Joaquin's daughter, still wears clothes of San Francisco's less desperate nineties. Occasionally, when she is mentioned in one of the papers, she hustles in with a box of chocolate candy bars and a box of assorted cigarettes for the office of the publication that had her in print. Well, there's nothing like trying.

* * *

Something for Nothing

I was waiting for my drink when a gentle tugging at my sleeve disclosed the presence of the Little Man at my side. "Nothingness is everything," he remarked.

"What do you mean?", I asked.

"The creation of the universe," the Little Man answered, "has long been studied by astronomers. Astronomy being a precise and exacting science, astronomers have long searched for the origin and evolution of planets, suns, earths, nebulae, universes and other miscellaneous astronomical phenomena. In their training, study and observations they have reached the opinion that planets are created through either one of two methods. The sun, revolving at terrific speed, throws off a piece of itself which cools and becomes a planet; or else two suns wandering among the heavens come close together where reciprocal gravitational attraction causes pieces to be torn off and cool off and rotate in a planetary orbit. Once these planets are established, we have the Darwinian Theory as to the evolution of man, which is you.

"However, these astronomers are unable to decide accurately as to the source of stars, nebulae or universes and I, therefore, propose the following solution: At one time all space was a mass of nothingness. Since there is a gravitational attraction toward the center of anything or nothing, portions of space began to be pulled toward this center and gradually formed various objects. Like the law of mathematics, if you subtract one from nothing, you have negative one. The concentration of positiveness would coincide with remaining negativeness and thus would originate something, balanced by a negative something, in all nothing. The gradual development of positiveness would cause the massing of nebular formations which in turn would concentrate about their centers and in so concentrating would form luminaries traveling in their respective orbits. These suns would then occasionally bump into one another, explode or in some fashion create planetary systems. In other words, the evolution of our earth proceeds from nothing to spacial massing of the positive to universe nebulae to stellar universe to solar system.

"Evidence of the positive side of the universe, or negative for that matter, is shown in the land we walk on, the buildings we work in, the things we see. Unknown to ourselves are great masses of negativeness which we cannot see. The sum total of the positive and negative is nothing. Therefore, you are nothing."

I finished my drink and bumped into the door, which was something.

* * *

Pocket Filing

Last month's item on filing systems was a lucid, masterly analysis of the desk filing system as practiced in this office. This month's shall be devoted to pocket filing systems as practiced by the same authority on this intricate problem.

The first step in the most approved system is a thorough monthly overhauling of the contents of all pockets, including pants watch pocket. Of course, the frequency of overhaul is more or less determined by speed of accumulation, but we should endeavor to avoid a greater frequency than twelve times a year to reduce wear on pockets and patience. There is reason to believe, however, that the clearing of pocket dockets is too often an annual affair.

The prime objective is to devote each pocket to certain articles and never to deviate from the plan. For example, the right pants pocket is best for loose change, the left for a spare handkerchief, the left hip for a wallet or you know the vest pockets for cards, gadgets, et cetera. But perhaps I can best demonstrate the advantage of thoughtful distribution by going over my own personal arrangement which is the result of years of experience. Here is the present inventory, taken as this is written.

Side pants pockets uninteresting. Contain some coins (all too

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ARCHITECT AND ENGINEER

DECEMBER, 1939

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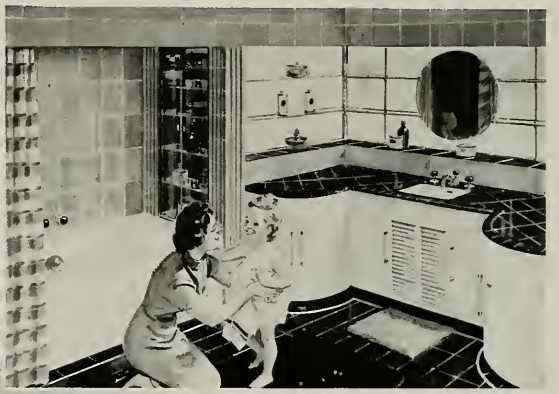

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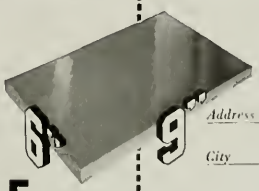
Find out, too, about Kraftile's "New Jobs Ahead" plan for turning prospects' inquiries into actual commitments for architects. Fill out the coupon today.

These sketches are from Master Kraftile ads that appeared in full color in the February and June issues of *Sunset* magazine. To date 2767 prospective home builders have asked for more information about these Master Kraftile rooms.



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Wouldn't you locate switches so that you would not have to walk thirty or forty feet to turn off the living room light and then make a hazardous return trip in the dark?

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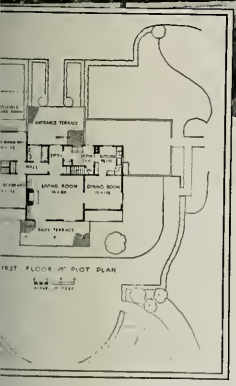

Left — Unique in its combination of compactness and flexibility (with provision for future addition of a room), this floor plan matches exterior charm and simplicity.

Dignified simplicity, "free-moving" plan, efficient utilization of space—these factors won national recognition for this residence designed by Architect W. W. Wurster for Mr. R. R. King, Atherton, California. ☆ Winter comfort is assured by a gas warm air furnace that runs itself. Hot water flows at the turn of a faucet — its dependable source, an automatic gas water heater. Cooking becomes a gay adventure with the smart gas range that keynotes a homemaker's dream of a kitchen. ☆ Prominent mention of gas appliances in *your* specifications is another way of saying "Modern, economical, complete."

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ARCHITECT A GOOD UMPIRE
From the Federal Architect

Some recent investigations into the construction of houses for the purpose of placing or renewing loans disclosed shockingly bad construction. At the time of sale attention had been distracted from such defects in the matter of framing, wiring, radiation, etc., by flashy paint jobs, tricky accessories and the like.

All of this points to the need for an architect in all construction work, not as a luxury but as a matter of investment. A long while ago the theory was exploded that it was a wise economy to save lawyers' fees by drawing up one's own will or other documents where binding legal phraseology was the primary factor.

The primary factor in a house is that it performs its functions properly. It has to be comfortable, strong, lasting and a pleasure to look at. The speculative builder will make it plenty good to look at. But can the purchaser depend upon him to be such a saintly character that, in the face of keen competition, he will not cut down five or ten per cent on the radiation, or use cheap framing lumber, or omit building paper and flashing, or run pipes, ducts and wiring so that future repairs are at unwarranted expense and with the maximum of annoyance to everyone concerned?

A house is like an automobile, only more so. An automobile always breaks down at a maximum distance from a service station, and at a time when the personnel of the station has left for the night. Similarly the lighting, or the plumbing or the heating of a house always breaks down over the week-end—when there are guests.

The most favored time for the bathroom plumbing over the dining-room to go into a drip is the week-end of Labor Day, when all plumbers go to the seashore. . . .

A contractor, or a builder, or an operator isn't the man to assume the responsibility for providing a house with a strong constitution. He wants to get out for the minimum cost, which is natural, since nobody likes to cut down his own profit. There has to be an umpire to see that for an honest price the builder provides a proper piece of construction, with no "may-be's" in it. And the only proper umpire is an architect.

As we say, a house is temperamental and always a potential source of expense and grief for repairs and replacement. For that reason it should never be put together under the sole control of a person whose instincts are to leave out rather than to put in the work and materials which are the essentials of good practice. The architect's fee is saved of course, but, in so doing, there is stored up a lot of expense and pain for the owner.

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CANTILEVER ROOF FEATURE OF PORTLAND HANGAR

A $200,000 hangar, embodying several innovations in design, is being erected by United Air Lines at the new Columbia Airport in Portland, Oregon. Construction will be completed February 1.

A feature of the building will be a partial cantilever roof, which by the elimination of supports on the airplane side, will permit the easy maneuvering of planes without the danger of damaging wing tips or tail assemblies.

A passenger waiting station, a baggage handling department, a commissary kitchen and various other departmental quarters will be included in the hangar building. The plans include design arrangements simplifying all movement in the terminal quarters.

The second floor contains offices for the flight operations department, the reservation department and also for two government agencies, the airways weather bureau and the Civil Aeronautics Authority. The operation office looks directly onto the field so that dispatchers and other flight executives may watch all field activities.

Albert Kahn of Detroit is the architect on the project.

---

400 YEARS OF MAPMAKING

The San Francisco Museum of Art is exhibiting one of the finest private collections of maps and atlases in the world—the collection of Alfred H. de Vries of the Hague, Holland. The exhibition, called 400 Years of Mapmaking, gives a comprehensive and comprehensible survey of the development of cartography from the 16th Century to our own day.

Representative of the rare and beautiful items in the show are:

Mercator-Hondius' Atlas in three volumes, printed in Amsterdam in 1641 (Mercator originated the term "atlas" and was one of the founders of cartography);

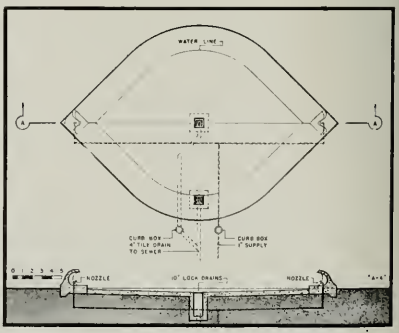
Blaeu's Atlas in 12 volumes — the first French edition, published in Amsterdam in 1663, with the City Books (most beautiful and expensive atlas ever published);

The Grand Atlas of Jaillot-Sanson, published in Paris in 1693;

The Carte Chorographique des Pays-Bas Autrichiens of J. Comte de Ferraris, published in 1777 (first finished map made of an entire country by triangulation);

The Atlas Universel de Geographie of Ph. van der Maelen, published in Brussels, in 1827 (first depiction of the entire world on a single scale).

PERSPECTIVE AND PLAN OF PLAYGROUND SPRAY POOL



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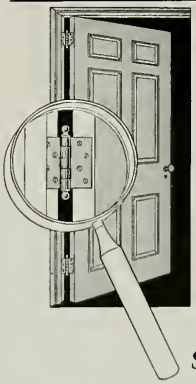

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SMALL SCALE GARDENING

By BERNIECE ASHDOWN
Landscape Architect

FOR those who live in apartments and cannot have a garden; for those who must temporarily give up their gardens in the winter; for those who want a hobby, and for everyone who is interested in growing things—miniature gardens will hold infinite fascination.

Small gardens have a great many uses, besides being decorative. As center pieces for the table they are splendid and may be designed for one's particular needs.

These gardens are surprisingly inexpensive. The careful shopper will find immeasurable attractive and appropriate materials at nominal cost.

Making them is easy and one need not wait long months for them to become interesting. From the time of their construction they are quite complete and become increasingly attractive as time passes.

The first step in the creation of any miniature garden is to determine its nature or character. It may be a desert garden with small varieties of succulents and cacti planted in sand; a reproduction of a woodland scene with tiny ferns, moss, liverworts and other typical plants, with perhaps a tiny stream, a wee bridge or a quiet pool made with a piece of mirror; a miniature Japanese garden with little gnarled trees, a simple lantern, or perhaps a tea house and wee figures of people to add life to the scene. Or you could have miniature pine covered mountains and a stag standing near a pool.

The choice of required material will depend upon the type of garden. For example, a desert garden should include only plants and objects which are characteristic of the desert while an Oriental garden would have things characteristic of the Orient.

The choice of a container is not of primary importance. Any shallow dish (not too large for the first attempt) will do. Its design should be simple and its color subdued. Bubble bowls of clear glass also make interesting containers.

Small stones, carefully chosen for their color and shape, make interesting additions to many gardens. They may be gathered from streams, roadsides, seashore or bought from nurseries.

Florists specializing in cacti and succulents have numerous tiny varieties that are easily grown.

Japanese florists have dwarfed trees and shrubs and in Japanese art shops one can find hundreds of tiny lanterns, bridges, figures and other objects. These are very interesting and useful, but they must be selected carefully to harmonize in color and size. Always use them sparingly, otherwise the garden is apt to look cluttered.

Moss and other wee woodland plants gathered from the woods and stream edges make charming gardens. Woodland plants must be dug with caution and patience. It is important to avoid bruising or crushing their delicate foliage or disturbing the roots. This problem can be greatly simplified if one is supplied with a trowel for digging and a small box for carrying them.

Foundation drainage is important. Some plants, it is true, require more moisture than others, but most plants dislike standing in water. The simplest way to solve this problem, since no holes can be made in the container, is to line the bottom of the dish with a layer of gravel and at all times avoid overwatering.

Contour should be carefully worked out. Mountains, peaks, and gorges are much more interesting than a flat surface. Sand and small bits of stone may be made to support and determine the general contour. Place over this, bits of sod, moss, cacti or whatever is to be included in the garden. Tweezers are useful in handling the very small ones.

The secret of success in design is simplicity. Never overcrowd. A little open space, even small quarters, is interesting. Choose rocks, plants and other accessories which are relatively in scale. This need not, of course, be actual, but rather apparent. Balance in design is important. It should not, in informal gardens, be symmetrical. Plan each unit of the garden so that without any one of them, the remainder of the garden will look balanced. No part should ever look haphazard. Plant in groups rather than singlely, balancing the garden so that one side will not seem heavier than the other.

A pool may be added by placing a piece of mirror in the desired location. Diminutive woodland gardens are enhanced by the addition of a small gnarled stem or a moss covered twig. Tiny bits of evergreen, placed so that the cut surfaces of their stems rest upon the bottom of the dish, will stay fresh for months. One may soon have a grove by planting orange and lemon seeds. The little trees are very attractive and have glossy aromatic leaves.

Perhaps you would prefer a simple collection of small plants in a dish—a tiny bit of outdoors brought inside—a clump of sod dug from a roadside bank or hill will have a multitude of tiny interesting plants, some of which may even bloom. If you wish to add to this collection, you may plant, in season, a half dozen Crocus bulbs or Lily-of-the-Valley.

Yes, gardening on a small scale has infinite possibilities for an imaginative person who has the time and a bit of curiosity about growing things.

BENEFITS OF SLUM CLEARANCE

America's slum clearance and low-rent housing program is following in the foot steps of all successful public housing move ments throughout the world by proving o inestimable benefit to local communities through stabilization of real estate value and stimulation of private building.

This definite aid of public housing to private enterprise is shown by the result of a USHA survey made public recently by Nathan Straus, Administrator of the United States Housing Authority.

A cross-section checkup of 43 low-rent housing projects owned by the United States Housing Authority in various parts of the country revealed that $9,339,300 has been spent during the past 18 months on both private and public construction and improvements that have sprung up in the neighborhoods surrounding the public housing developments.

Of this sum, $5,633,379 represented the cost of constructing, improving or repairing 2,084 private buildings, of which 1,72 were residential and 359 commercial buildings or churches.

Of the 1,725 dwellings, 716 were new individual dwellings and 1,009 were contained in 14 large new apartment houses.

Next to private home construction the most notable improvements were stores and places of business, of which 74 were newly constructed and 83 were improved or repaired.

A breakdown of statistics revealed in the USHA survey follows:

NEW CONSTRUCTION

Private Buildings	No.	Value
Stores (All types)	74	$ 458,92
Gasoline Stations	17	141,00
Markets	4	82,57
Movie Theaters	5	354 00
Office Buildings	8	22,50
Other Commercial	87	57,57
Dwellings (family)	716	3,471,82
Multiple Dwellings	14	208,00
Churches	5	79,00
Total Private Building	930	$4,875,39

IMPROVEMENTS AND REPAIRS

Private Buildings	No.	Value
Stores	83	$ 154,10
Gasoline Stations	9	17,50
Markets	8	7,00
Movie Theaters	4	20,00
Office Buildings	15	4,70
Other Commercial	36	118,05
Dwellings	461	201,15
Multiple Dwellings	534	248,77
Churches	4	16,50
Total Private Improvements	1,154	$ 787,91
Total Private Construction and Improvements		$5,663,33
Public Improvements (Schools, parks, play areas, streets, sidewalks, etc.)		$3,675,97
Total Private and Public		$9,339,30

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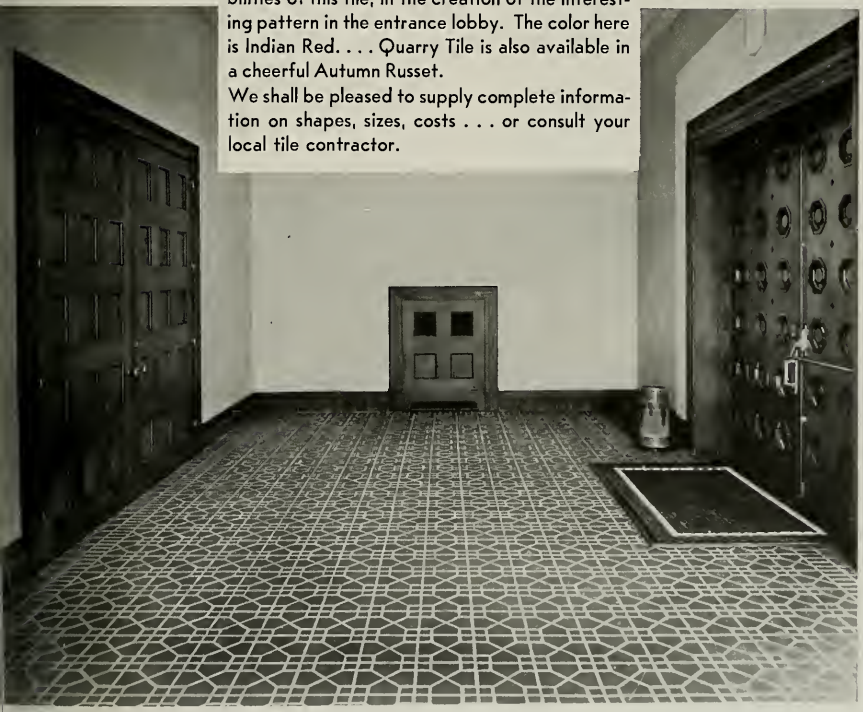
We shall be pleased to supply complete information on shapes, sizes, costs . . . or consult your local tile contractor.



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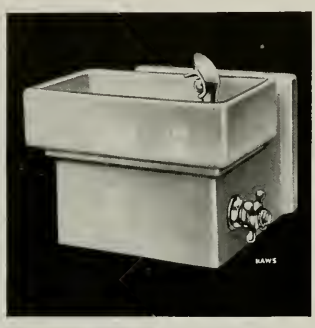

Model No. 7 D — Pacifica

Model 7D, vitreous china drinking fountain with CP brass, raised and shielded anti-squirt, angle stream fountain head. This fountain is designed for the needs of all types of public buildings.

Model No. 80 with stream controlled head is one of the latest and most popular school and office type fountains. It is a practical space saver.

Model No. 80 — Capitol Full Recessed

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ENTRANCE DETAIL, HOUSE FOR MR. ORTON LUCAS, ORINDA, CALIFORNIA

FREDERICK L. CONFER, ARCHITECT

Photo by Waters & Haini

RONT ELEVATION, HOUSE FOR MR. OTIS R. MARSTON, BERKELEY *Photo by Esther Born*
dridge T. Spencer, Architect

RCHITECT'S MOOD EXPRESSED IN HIS RECENT WORK

THE work of any architect reflects on the one hand the social structure and style trends of the times and on the other, the individual characteristics of the architect.

Eldridge T. Spencer's work, shown in this issue, reflects our present tendency toward ublic and semi-public expansiveness as opposed to private economy. It reflects also today's yle trend toward composition in texture of materials and in close color harmonies. His dividuality is expressed in an emphasis on structural solidity.

In the United States the most original contribution in the field of architecture in recent ears has been made in the industrial field, notably the skyscraper. Today, with the tremendous evelopment of the Mall at Washington, all signs of the times point toward great public uilding projects as replacing commercial and private enterprise.

The drawings for Alcatraz Island in San Francisco Bay, done by Mr. Spencer in collabora- on with Claude Meyer-Levy and Ralph Stackpole, are an expression of the present emphasis public building. The focal point of the project is a heroic figure of Peace facing the Golden ate to welcome visitors to our Western shores as the Statue of Liberty in New York Harbor s long welcomed voyagers across the Atlantic. The goddess stands on a broad terrace in ont of the Pacificorium. To her right are a light house, gardens protected from the winds by cite screens and a club house. To her left are exhibition buildings and a sheltered harbor. rectly in front are a navigation rotunda and a folk lore theater.

The conception is distinctly reminiscent of the idea expressed by the Golden Gate Inter- tional Exposition in the group of foreign buildings surrounding Pacific House and in the Court Pacifica. Both showed in plastic terms a desire for peace among the peoples of the Pacific

HOUSE OF OTIS R. MARSTON, BERKELEY

W. H. Livingston, Builder

Photo by Esther Born

DETAIL FROM SOUTHWEST

LDRIDGE T. SPENCER, ARCHITECT

EW FROM NORTHWEST

nd suggested as a necessary attribute of eace in the West, the enjoyment and knowldge of Pacific cultures.

At present Alcatraz Island is a Federal prison, opularly known as "The Rock" and described y Attorney-General Murphy as a "Place of orror." No change in existing contours would e necessary to transform it into the proposed land center dedicated to peace. The Godess of Peace is by Ralph Stackpole. She is ery similar to his statue of Pacifica at the olden Gate International Exposition but one nd one-half times as high and executed in ainless steel instead of plaster. This goddess

PLANS

HOUSE FOR MR. AND MRS. A. S. OLOFSON, PIEDMONT

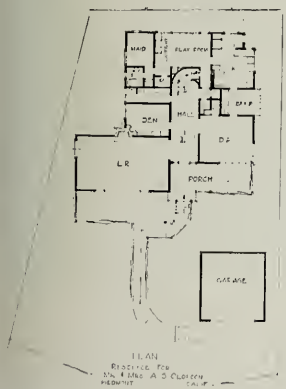
FRONT ELEVATION

and the triangular shaped light house have a strong vertical movement which contrasts pleasantly with the horizontal line of the buildings and with the natural contours. The Island closely resembles a great ship, 1800 feet long, sailing out to sea. The prow of the ship is occupied by a folk lore theater, so oriented that its proscenium arch frames a colorful view across the water to the Marin hills. Equally interesting is the panoramic view of the bay cities, to be seen from the dining terraces which overhang the water at the stern-like eastern end of the Island.

M. Meyer-Levy, who was Mr. Spencer's collaborator on the project for Alcatraz Island, was sent to the Golden Gate International Exposition by the French Government as one of the architects of the French Pavilion. Mr Spencer also collaborated with M. Meyer-Levy and his co-architect, Georges Besse, on the French Pavilion and the Cafe Lafayette. The view of these two buildings shown here ha much of the mood of old Paris, due to a typi cally French feeling for spatial relationships. I style, the buildings belong to the attenuate classical architecture much in vogue in Pari today.

Also modern but totally different in feelin is the small residence built for Otis R. Marstor This is a modest dwelling possessing the charr that comes from pleasant proportions and de light in intimate detail rather than daring spac composition. Today homes tend to be simple More and more, large scale, imaginative crea

EW FROM SOUTHWEST



PLANS

SECOND FLOOR PLAN

HOUSE FOR MR. AND MRS. A. S. OLOFSON, PIEDMONT

DETAIL OF **REAR ENTRY**

DETAIL OF LIVING ROOM WINDOW

tion in space is left to civic buildings, expositions and the movies. The little residence shown here has a self-contained air, due partly to the high brick garden wall and partly to its own structural solidity. The brick and stucco surfaces contrast delightfully and are a good example of composition in different textures.

In the residence of Mr. and Mrs. A. S. Olofson, the play of texture is less important. The smooth wood surfaces, though a foil for the rougher plaster, are important primarily for the Chinese Chippendale pattern they introduce. Yet neither pattern nor texture nor the excellent relationship of the building to the topography of the site, is the reason for the satisfactory character of the design, but rather the interesting relationship of the enclosed volumes.

The third residence illustrated is that of Mrs. E. L. Walbridge near Skagg's Springs, Sonoma County. Two views of the interior are shown; one looking from the living room into the dining room, and the other showing the dining room itself. The details of these interiors are Colonial. Carefully studied, the close color harmony of the surface finishes is modern. In the living room the finish of the wood panelled walls and the doors is a warm golden tone while the furniture finish is considerably darker. This light golden tone of the living room walls carries into the dining room in the doors and the furniture. The Glen Avon rug and the linen draperies are in the same key but less golden and more definitely yellow in color. In contrast, the wood panelled walls have an off-white crackled finish.

Play of scale in the dining room is as interesting as the color harmony. While the walls and classical panelled screen are the same in scale, the rush bottom chairs are a little lighter, the

HOUSE FOR MR. AND MRS. A. S. OLOFSON, PIEDMONT

LIVING ROOM

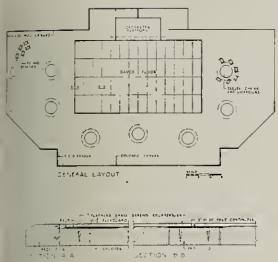
CAFE LAFAYETTE. G. G. I. EXPOSITION. SPENCER, BLANCHARD & MAHER, ARCHITECTS; CLAUDE MEYER-LEVY AND GEORGES BESSE, ASSOCIATED

dining table distinctly heavier. The furniture
the design of Jeanette Dyer Spencer. She h
created several pieces in the same style as t
table, which she calls the "Carver" type, sin
it was inspired by the heavy turnings of the o
"Carver" chairs. Actually, the table is fun
tional in design, the distance between legs b
ing determined by the width of the chairs, t
depth of the apron fixed by the size of t
extension slides contained beneath the to
and the diameter of the legs determined by t
absence of stretchers. These were omitted f
the sake of comfort.

More obviously functional in design is t
outdoor dance floor for the Ahwahnee Hotel
Yosemite National Park. Here the requiremer
were extreme low cost, imperviousness to h
sunlight, to cool nights and occasional rai
The solution of the problem shows an interesti

(Turn to Page 26)

CONCRETE TENNIS COURT MADE INTO OUTDOOR DANCE FLOOR

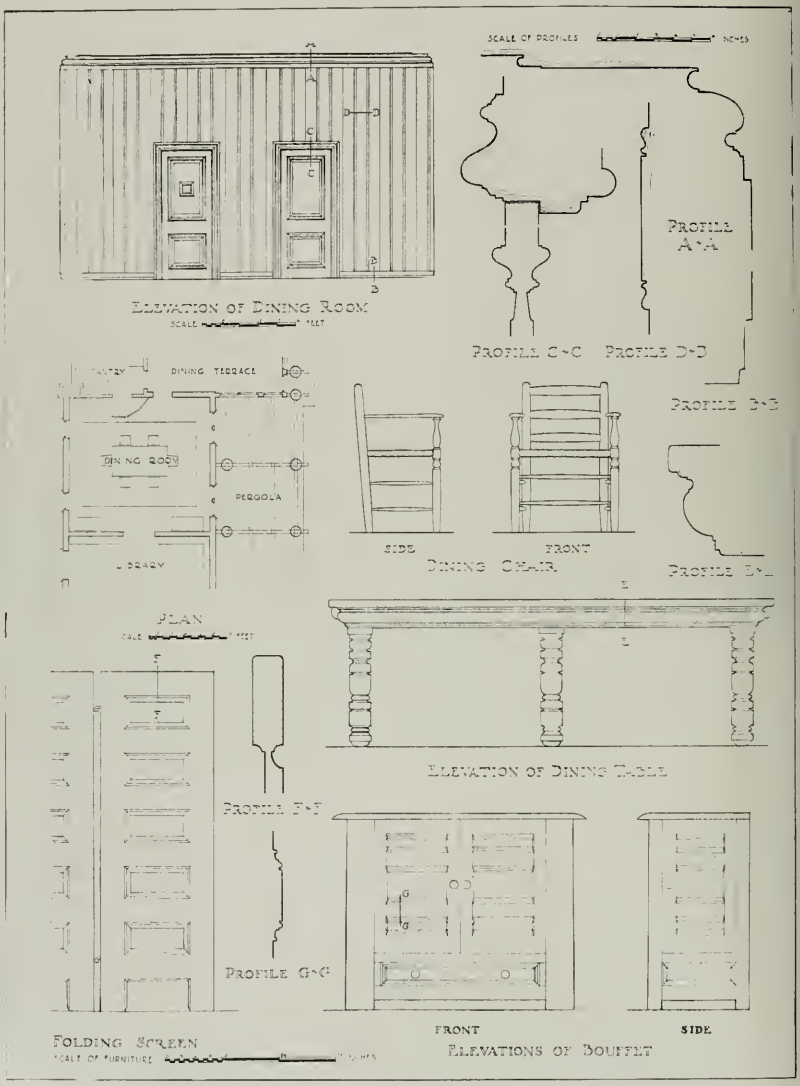


PLAN

In six hours time a concrete tennis court at the Ahwahnee Hotel, Yosemite Park, was converted into a practical out-door dance floor. The dancing surface is constructed of Flexboard with Celotex panels serving as a cushion between the concrete slab and the floor surface. The entire floor was designed to float on top of the concrete without being attached in any manner to the slab. The floor proved a great success during summer vacation, at the end of which the covering was taken up and stored for the winter.

ELDRIDGE T. SPENCER, ARCHITECT

RANCH HOUSE FOR MR. AND MRS. E. L. WALBRIDGE



ELDRIDGE T. SPENCER, ARCHITECT

DINING ROOM

Photo by Ansel Easton Adams

THE scale drawing reproduced on the opposite page shows the wood panelled dining room in Mrs. E. L. Walbridge's Sonoma County ranch house and the furniture designed for it.

The woods used are: Ponderosa pine for the ceiling and walls, wide oak planks for the floor, birch for the screen and twin buffets, and maple for the table and chairs.

The walls, with their richly moulded battens, have a strong vertical movement. The furniture, in contrast, is horizontal in design.

An unusual feature of the buffets is found in the wide stiles which contrast sharply with the thin line of the top. This width in the stiles makes possible the two end compartments used for the silver service. Wide stiles are also a feature of the birch screen. The panels in this screen are small in scale and deeply moulded, recalling fine, old Colonial panels.

The maple table and chairs are a rich, honey tone, a trifle lighter than the screen and buffets. The table is extended to seat twelve people without moving the robustly turned legs.

RANCH HOUSE FOR MR. AND MRS. E. L. WALBRIDGE

LIVING ROOM TO DINING ROOM

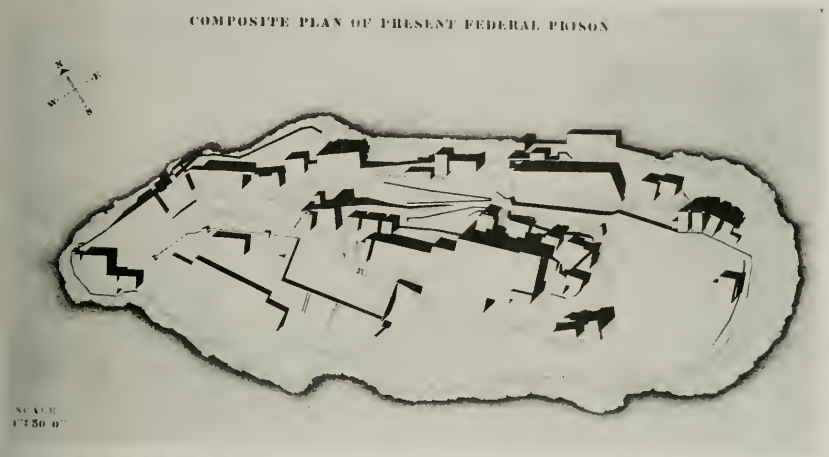
(Concluded from Page 22)

new use of "Flexboard" in 4 x 8 foot sheets and screwed down to a gridiron of 1-3/16 x 2¾ inch wooden strips, 4 feet on center in one direction and 8 feet in the other. To provide the required springiness, "Celotex," 1 inch thick, was used between the nailing strips as a base for the board.

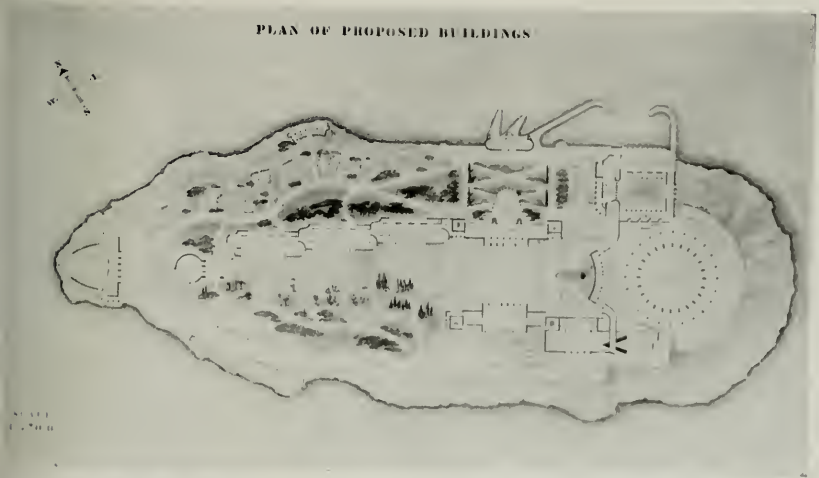
The floor was immediately successful both on account of the smoothness of the surface and the cushion effect of the Celotex. Low labor costs, as well as the low cost of materials, made it economical. Thirty-two feet by fifty-one feet overall, it was laid on top of the smooth, hard concrete surface of the Ahwahnee tennis court in just six hours.

In conclusion, an architect driven by economic necessity builds dance floors out of Flexboard. Freed from economic pressure, he delights in imaginative space composition and develops projects expressing our aspirations. The architectural vocabulary of his time is at his fingertips. Its tricks in detail of form, line, color and texture and, above all, its concepts are his. Yet one thing remains to him which is individual, namely his expression of mood. With some architects pyrotechnics in the use of the modern architectural vocabulary gives the brittle mood so common in modern social life. With Mr. Spencer, mood relates to his feeling for sculpture, his delight in volume relationships and his desire for that sense of well being which is derived from a feeling of structural stability.

PROPOSED PACIFIC RELATIONS CENTER AT ALCATRAZ ISLAND



COMPOSITE PLAN OF ISLAND



PLAN OF PROPOSED CENTER

PROPOSED PACIFIC RELATIONS CENTER AT ALCATRAZ ISLAND

VIEW FROM AIRPLANE

SOUTHWEST ELEVATION

With the attention of the whole world directed towards the scene of recent Russian bombing, this graphically written article of a progressive and peace minded country, narrated at a time when normal conditions prevailed, has unusual interest. It was late in 1937 that the author visited Europe's Far North to gather these architectural impressions of Scandinavia—before the trend of design was forced toward bomb shelters for air raid protection. But as this issue goes to press, one no longer can think of these peace-loving peoples as being "free from war threats;" today we watch with alarm their fast-growing troubles in a war-torn country.—Editor.

EYES NORTH! TOWARDS THE SCANDINAVIAS

By HARRY SANDERS, Jr., B. Arch.

ICELAND, I always had thought, would be a land of bleakness and intense cold with inhabitants of a more-or-less Eskimo type living in igloos or, at best, in shacks similar to those shown in our American Wild West motion pictures.

In Hammerfest, Norway, the most northerly city in the world, fish warehouses line the waterfront.

But finding Reykjavik, the capital, a modern city of 26,000 citizens living in a much milder climate than in relative positions on our own continent—thanks to modiyfing influences of the Gulf Stream—was only one of many surprises I encountered last summer on the North Cape-Russia cruise.

Being an architect, architecture was my foremost interest on the trip, and even my most ambitious preliminary expectations were surpassed in what I found, both in the Modern work of which so much is written and in the ancient work of which little is known. Yet, finding excellent examples of building in the five Scandinavian countries visited, I found myself wondering why, in such quiet civilizations so isolated from the hustle and bustle of other European countries, these peoples have progressed so far that today the eyes of the world are upon them. (Let's include Iceland in this Scandinavian group since it acknowledges allegiance to the Danish crown and since the Icelanders are descended from the same Viking stock.)

But while these Northern countries in the Land of the Midnight Sun have not been, until late, on the London-Paris-and-the-continent itinerary of the proverbial American tourist, their inhabitants have gone along for centuries instilled with that Nature that spells Progress. Born with instinctive talents and taste for the arts, they have lived in lands substantially free from war threats; their problems of unemployment, poverty and slums now are few; their economic security and desires for the betterment of living standards have been aided by the increase of the cooperative movement during the last ten years, and, speaking architecturally, their younger designers were among the first to create originality by breaking away from the widely-used and ever-respected traditional styles. So today commissions from many governments study their every move.

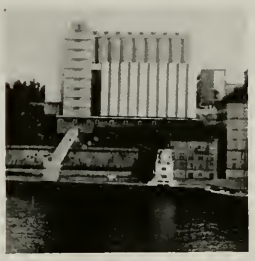
After cruising through severe storms off the coast of Greenland, our ship—eight days out of New York—arrived in the sunny harbor of Reykjavik, near the site where in 930 A.D. the world's first Parliament met in the crater of an extinct volcano.

Esthetically speaking, little may be said of the city's architecture. However, the cold gray concrete dwellings, styleless but neat, seem appropriate, and the numerous gardens and flower boxes brighten the treeless landscape. Of particular interest was a century-old frame church —the Lutheran church predominates in all Scandinavia—which, except for a steeple of questionable Norse origin, would feel at home

Photo by Elizabeth J. Weber

The 800-year old Fantoft Stav church in Bergen, Norway, would bewilder any historian of architecture.

in any New England village. The large hotel Borg and the many shops show that Modern design soon will leave its stamp in that vicinity, and a visit to the self-designed residence-museum of Jon Jonsson, Iceland's foremost artist, gave evidence that art is not lacking on the island; his statuary is cold, gigantic, almost grotesque . . . but not without feeling.



From the architectural office of Sweden's Cooperative Society came the design for this silo-mill at Stockholm.

A bit about the people: the natives were friendly in their welcome, and, strangely, a large percentage of them spoke English—perhaps more fluently than in other Northern countries. The women of the city wore American-made make-up; the restaurants advertised with pride their "New York Ice Cream Sodas;" our Norwegian-born guide informed us that she missed the snow of her homeland, Reykjavik being comparatively snow-free all winter! Two miles from the city, in the midst of bales of codfish—the Icelander's livelihood depends upon the fishing industry—our tour included the Laugar Hot Springs where thrifty wives wash clothes in the open-air cauldrons of steaming hot water; the springs have been piped to houses and public buildings for cooking and heating purposes.

We crossed the Arctic Circle and cruised farther and farther North for three days; during this time the sun did not set. The fourth day from Reykjavik found our ship at Hammerfest, Norway, the most northerly city in the world. (The "God Dag" with which the population of 3500 greeted us was not the international insult; when translated, it became a friendly "how do you do?.")

With its fur traders and fishing fleets, this town fascinates the visitor, but foremost in my mind was the thought of its long, dark and snow-bound winters 300 miles above the Arctic Circle. The architectural eye was pleased with this peculiarly quaint hamlet of wooden houses and buildings; and it was interesting to see a tiny concrete structure of extreme Modern design being erected on the mountain top as a combination lookout and souvenir stand. (We learned here that all Scandinavians admire and pay high prices for tropical and desert cactus plants, a proof that "the other man's pasture looks greener.") A few miles North of Hammerfest we viewed the midnight sun from the peak of the North Cape, the most northerly promontory on the European continent.

The following day at the head of the beautiful Lyngenfjord, amidst snow-capped mountains, glaciers and waterfalls, we visited a colony of dwarf Lapplanders, their conical-shaped tents and their herds of semi-wild reindeer. New York's filthiest tenement would be Utopia in comparison to the living conditions of these Nomads who spend their summers on the coast of Norway. Peering into one small tent—reluctantly—we saw a mother dog and eight puppies, many drying codfish hanging from poles, several children dressed in thick, dirty garments—despite the warm temperature—an accumulation of garbage and trash on the dirt floor, and a mother Lapp and her half-day old baby! How startling a contrast with the world-renowned cleanliness of the Scandinavians!

Stockholm's world-famous Town Hall appears to be the connecting link between traditional and Modern architecture.

Farther down the coast of Norway the once Viking capital of the country, Trondheim, with its 60,000 inhabitants, street cars, restaurants and bright lights brought us back to traffic jams. Its wooden houses and broad streets were attractive, its market place colorful, but the greatest attraction was the cathedral, "the largest and finest ecclesiastical build-

rhaps Finland's lack of antique architecture sponsored this combination restaurant, theater, bus station and shop ilding in Helsingfors.

ing in Scandinavia." Started in the eleventh century in Roman style, it was destroyed many times but now stands as restored since 1869 in the best Norman-Gothic style. Its massing is not unlike Winchester cathedral in England.

Descriptions of the next several stopovers—espite superb beauty of mountains, lakes and ords—will bear omission. However, we might ention the typical Norwegian farm house. uilt of hand-hewn logs, often with an overanging second floor, their roofs consist of urf—over rafters—in which grass, multi-colred flowers and, occasionally, even small trees re grown. The quaint interiors of these houses, hich have varied little in several hundred ears, contain hand-painted and carved furniure and often a central hearth from which moke escapes through a hole in the center of he ceiling of the room.

Bergen, second only to Oslo in size, preented a picture of a combined ancient and odern city—narrow steep lanes and broad horoughfares and parks, Hanseatic League ouses dating from 1350 and new buildings howing the principles of functional planning. A isit to the 800-year old Fantoft Stav church as a worth while pilgrimage. Like most Stav hurches, its high gables topped with Oriental ragons, its outside pews for lepers and its laborately carved interior woodwork would ewilder any historian of architecture.

Oslo, a friendly, hustling cosmopolitan city, progressing with excellent schools, parks and w-cost housing projects. But summing up rchitecture in Oslo—and Norway as a whole, or that matter—I would say that the country as far to go before reaching the advanced tate of architecture and design as found in weden, Denmark and Finland.

The first Swedish port-of-call was medieval, romantic Visby, "the city of ruins and roses," on the Isle of Gotland. Its quiet streets and many magnificent Gothic churches and cathedrals in ruined splendor are encircled by a sturdy wall with 37 towers. The ruins and the ancient stepped-gabled houses are covered with roses; even non-artists could not resist the temptation to sketch. Two miles outside of the town wall is located a popular resort hotel of excellent Modern design; cabanas and beach umbrellas transplant a bit of the Riviera to the Baltic Sea.

In Stockholm progress is written on every face, interest on every building. How futile to describe on paper the grandeur of this city of islands and its skyline of steeples and towers, old and new; its thousands of lights reflecting in the harbor and numerous canals; its Old Town quaintness and its unbelievable solutions to modern traffic problems—water taxis are as prolific as motor vehicles! The graceful openwork iron steeple of the Riddarholm church, Sweden's Westminster Abbey, and the palace of Sweden's democratic, tennis-playing King Gustav V are seen from many sections of the city.

Stockholm's contemporary architecture is divided into two definite types: the Romantic and the Modern.

Seen from the water on two sides, the Town Hall, designed by Ragnar Ostberg, is perhaps

Rear view of Helsingfors' combination restaurant, theater and bus station.

the world's most famous new building and, as often is said of it, appears to be the connecting link between traditional architecture and the new. Its beautiful materials and coloring incorporate details from many lands—here a Venetian arcade, there something Oriental, and yet many interior details are Modern-Classic in feeling. Each room is a masterpiece of a type; one's impressions are bewildering yet gratifying. To mention a few other Romantic examples, there are the Concert House, the Swedish Match Company's head office and the Enskilda Bank by Ivar Tengbom; each is Classic but of proportions that express freedom from the usual dated works. Tengbom's Hogalig church of bold design shows strong Swedish nationalism. The country's famous craftsmen contributed significantly to these buildings with their sculpture, murals, furniture and appointments.

There are examples of the Modern by Tengbom, too. His City Building, which incorporates a hotel on the top floors of an office-bank building, and his Esselete building both consist of plain wall surfaces horizontalized by windows. There is little ornamentation, but the buildings do not adhere to all requirements of the Modern School. From the architectural office of the Cooperative Society has come excellent work, of which a silo-mill appealed to me most. Of the many apartment and housing projects in the city, I would say that the use of color on simple surfaces is of prime importance; row after row of similar dwellings avoid monotony through gradual variations of their colors from light blue to tan to yellow and orange.

Next our ship took us to Estonia's charming capital, Tallinn, now un-Scandinavian and un-Russian despite its location on the Baltic. Here we previewed the art and architecture of a country we anticipated visiting—Russia.

But I will not attempt to understand Russia politically, socially, economically nor architecturally from a mere four days in Leningrad and Moscow. In other words we will discuss these Soviet cities briefly and without editorial comment.

There is evidence of some progress amidst quantities of dilapidation. Many new buildings and factories stand incompleted; roads are under construction, and all of Moscow's bridges are being raised and repaired. Lenin's red marble tomb on Red Square and several substantial buildings in central Moscow portray the strength exemplified in the Soviet's new architecture. Contrasted with this, however, is the capital's new subway, so ornate that it invites comparison with the most elaborate pre-Revolution palaces, of which there are many.

So clean is Helsingfors, Finland's capital, that it has been christened "The White City of the North." This country of lakes and forests became independent at the close of the World War, and since then great strides have been taken with its recent architecture and sociological developments. Elien Saarinen's granite railroad station, erected in 1922, is world-famous for its sensible working plan. The Parliament House, by J. S. Siren, is distinctly Classic in feeling but includes Modern features in the interior decorations of its halls and its circular senate chamber. Perhaps Finland's lack of antique architecture has sponsored its superior work in apartments, theaters, cafes, churches and stores of Modern design; in many instances plate glass is used for interior partitioning, chromium for trim work and furnishings; and walls, floors and ceilings are of varying pastel shades. A Lutheran church, startlingly Modern, retains a feeling of reverence and warmth by the use of light blue woodwork and pink floors in contrast to its bare white walls; brickwork alone gives texture and character to the exterior. The work of Alvar Aalto, who has become world-famous as a designer, probably is the country's most interesting and most original architecture today.

Originality in the use of new building materials in contemporary architecture is seen immediately in Copenhagen, gay capital of Denmark. The Modern work being executed there, however, is of a more moderate, less radical type than in its neighboring countries —perhaps because the Danish people, proud of their cultured civilization and conservatism, long have been prone to reticence.

(Turn to Page 39)

OUTDOOR LIGHTING REACHES NEW PEAK OF INTEREST

By AGNES M. BARRELL

A FAIRLY accurate appraisal of the advantages of living in California at this holiday season of the year 1939 might be summed up as: "in the lap of the gods."

Certainly with a mad world featuring nightly blackouts; with the constant menace of destruction from sea, land, and air; with prized architectural showplaces buried under tons of sandbags—there are few places on the earth where people are free to celebrate the birth of him who came to teach "Peace on Earth—Good Will to Men."

California, favored spot on a continent of peace and security, is celebrating Christmas in its own original way, as it has celebrated it for twelve previous years, with lights, and more lights. Instead of blackouts, the star that announced the birth of Christ two thousand years ago is to be symbolized by millions of man-made stars—lamp bulbs that create a dazzling spectacle of beauty.

Instead of beautiful buildings swathed in sandbags, the architectural features of lovely buildings will be accented with every type and color of light known to modern science.

Instead of cowering in lightless rooms, people will be spending the holiday evenings driving in gay groups through the fantastically beautiful residence districts of cities and towns, and to view miles and miles of glittering trees that line the highways.

Each year see increasing participation in this festival of lights. Each year more people light their homes, their stores, their apartment houses. More towns and villages decorate streets, parks, and public buildings. More miles of highway leading into cities and towns are decorated each year.

A FEELING OF FRIENDLINESS AND QUIET DIGNITY IS CREATED HERE WITH SIMPLE DECORATIONS

COMBINATION OF INDOOR AND OUTDOOR LIGHTING

This year the interest has reached a new peak, and the Outdoor Christmas Tree Association* is having the busiest time in its history. This association, unique in the world, has sustained the outdoor tree idea throughout its twelve years of activity, and has consistently promoted the slogan: "An Outdoor Christmas Tree for Every California Home," and "A Mile of Christmas Trees for Every California City."

No one knows how many trees have been planted in gardens and along highways because of this activity, but it is safe to say that many thousands of forest trees would have been cut for this purpose if the movement for living trees had not been pressed so vigorously.

The Association is headed again this year by Mrs. Alma deBretteville Spreckels Awl, under whose personal direction it has been carried to unhoped for heights of popularity and success. Active with her on the board of directors this year are leaders in the professional, business, and social life of California, all giving generously of their time and talents and donating generously for prizes to promote this expression of the holiday spirit throughout the state.

*Serving on the board of directors this year with Mrs. Awl as president and Mrs. Erroll MacBoyle as vice-president, are: Elmer Maclay Awl, Frank Belcher, James B. Black, Henry Boyen, Billie Burke, Mrs. George T. Cameron, Leo Carrillo, Harry Chandler, Mrs. George Creel, Leland Cutler, Mrs. Alexander de Bretteville, Mrs. Ambrose N. Diehl, Frank C. Dougherty, R. E. Fisher, A. P. Giannini, Mrs. Joseph D. Grant, Marshal Hale, Mrs. Samuel Knight, Mrs. Clarence Lindner, Mrs. Jaffet Lindeberg, Atholl McBean, Mrs. Angus McDonald, Mrs. Felix S. McGinnis, John McLaren, Dr. W. W. Leslie, Mary Pickford, Mrs. George Pope, Mrs. James W. Reid, May Robson, Mrs. John N. Rosekrans, Arthur E. Rowe, Adolph B. Spreckels, Mrs. Ferdinand Theriot, Paul Verdier, Michael Weill.

LIGHTING METHODS AS INDIVIDUALIZED AS THE HOMES THEMSELVES

BACKGROUND FOR OUTDOOR XMAS LIGHTING

NOTE HOW ARCHITECTURAL LINES ARE ACCENTED WITH POINTS OF LIGHT

ORIENTAL ARCHITECTURE FOR CHINATOWN HOUSING UNIT

By MARK DANIELS, JR.

THE need of better housing in San Francisco's Chinatown is emphasized in a report recently made by the San Francisco Junior Chamber of Commerce in connection with a movement to secure Federal assistance in a slum clearance program that is calculated to improve present alarming conditions in the Bay City's Oriental district.

Intimately tied in with San Francisco is her famous Chinatown. The Chinese first came to California in 1848. From that year, with its Chinese population of 7, to 1851, 12,000 immigrants moved to California and became an important part of San Francisco history. The builders of Old Fort Point turned to these immigrants to build the sea wall extending from the Point to the Marina. Too, in this historic monument are many granite staircases, all fashioned in China, shipped to San Francisco, and set in place like a mosaic by Chinese craftsmen.

As long ago as the 80's and the 90's Chinatown was recognized as a tourist attraction. The color of the largest Chinese colony outside of Asia became as well known throughout the United States as the Barbary Coast—but, unlike the Barbary Coast, the allure of the district continued after its razing and rebuilding with the great fire in 1906. Chinatown is an integral portion of San Francisco's romantic background and history.

The story of Chinatown was one of single men for many years. In 1851 there were but two Chinese women in San Francisco, and even now the proportion of men to women is three to one. With the dominance of single men, the typical building was one where all rooms were one-man units; and baths, kitchens and toilets were public to the whole hotel or rooming house. Too, as headquarters for all Chinese in California, each man, no matter where he worked in the State, felt it a duty as well as

CHINESE ARCHITECTURE FOR CHINATOWN

PROPOSED HOUSING UNIT TO REPLACE SLUM CONDITIONS IN CHINATOWN, SAN FRANCISCO
Mark Daniels, Architect

STUDY FOR APARTMENT ROOM IN PROPOSED HOUSING UNIT, CHINATOWN, SAN FRANCISCO
Mark Daniels, Architect

an honor to rent a room at all times in Chinatown—and this pratcice has continued down to today.

At present there are 20,000 Chinese men, women and children living in 20 square blocks, most of these being crowded into the 9 blocks within the original residential Chinatown. With changing conditions, the rooming facilities have remained the same, and the one-room apartment must now serve a family of 3, 5 or 7.

Regarding the health in Chinatown, the worst condition is found in respiratory diseases. With less than 3% of the population of the city, Chinatown has 25% of the tuberculosis cases in San Francisco. Such a condition furnishes evidence of over-crowding and bad health standards. Bronchial pneumonia is another prime cause of death in Chinatown, ranking third there and not appearing in the five major causes in San Francisco. There is a lack of sunlight, a lack of proper sleep due to over-crowding, poor diets, few playgrounds, and other factors that prevent proper or full muscular development, as is prevalent among the white citizens of San Francisco. Bad teeth and skin diseases are common, the latter being largely due to the cramped conditions.

The major cause for alarm, though, is the remote yet ever-present danger of plague or epidemic which could wipe out much of San Francisco. The possibility of infection from rats is great. There is little rat-proofing of basements, and the chance of contact with people is large. If five persons live in one room there is a better chance that one of them will be infected by a rat than if one person lived in that room. A plague or epidemic would ruin business, not only in Chinatown but in San Francisco. The city would lose its tourists and parts of its commerce and business—like H. G. Wells' city of the future, wild animals would walk the deserted streets.

Chinatown suffers from an increase in crime and juvenile delinquency. The older Chinese are at present worried over the dissolution of the institution called "the family," and that is because over-crowding, proximity of persons, and bad health tend toward promiscuousness and moral laxity. This only furnishes a further proof that the deplorable conditions of housing require serious remedial action.

Paradoxically, Chinatown has a lower fire insurance rate than other portions of San Francisco. This rate is not due to safety facilities, because gas meters, unprotected gas lines, valves, etc. are often to be found in the public halls as well as in living and sleeping quarters. It is because of overcrowding—not all can sleep at the same time and someone is always awake to stop a fire at its inception.

The conditions described arise through overcrowding. An example of over-crowding is this, taken from a recent survey made by Chinese social workers. For 978 persons there were 19 bath tubs or showers, 33 toilets, and 49 kitchens. There were 33 families, comprising 157 individuals, living in one room per family. With families having two rooms, there were 429 individuals living in 150 rooms. In all, the survey covered 978 persons living in 346 rooms, 50 of which rooms were without windows.

The Department of Public Health under Dr. J. C. Geiger has undertaken to correct these conditions. There has been established a Chinese Health Center which has aided materially in reducing disease in Chinatown. The Housing Division under Mr. Thyle may condemn certain buildings, but when these buildings are condemned there is no place for the removed Chinese to go, unless they wish to crowd in with other Chinese and live in equally bad or worse conditions. With this situation, Dr. Geiger is, and will be, hampered until such time as proper housing facilities are made available to the Chinese.

If a man has a boil on his leg, what does he do? Does he neglect the boil and exercise the leg or does he cure the boil? The treatment is for the boil as well as the leg. With this logic, the San Francisco Junior Chamber of Commerce, the Chinese Junior Chamber of Commerce and the Chinatown Housing Project Committee have taken up the fight to have money appropriated from the Housing Authority funds for the erection of a housing unit in Chinatown. From a civic standpoint they have considered not only the health of modern housing conditions, but they have considered the

benefit the entire city will receive. In this regard, they recommend that a housing unit be built in Chinatown, that it be vertical in stories of height and Chinese in architectural character, to aid not only the Chinese but the City of San Francisco.

At the request of the San Francisco Junior Chamber of Commerce, Mark Daniels, A.I.A., prepared the architectural studies shown herewith. They represent the ideas of a prominent architect who has made a long study of Chinese architecture, and also, they embody the features suggested by the Junior Chamber of Commerce.

The architecture shown by the exterior sketch is of the type found in western and northern China. Here the purest form of Chinese art contains simplicity and elements found in Roman architecture. These elements may have been copied by the Romans from the Chinese, for certainly the Chinese antedate the Romans. The white line beneath the top story window is seen on many monastery buildings in China. It is really a row of prayer curtains hanging from the windows and the painted strip is an effort to give representation to these ever-present sites on Chinese religious retreats.

If this housing unit is constructed it will assist in preserving Chinatown in a healthy condition, and thereby preserve its attraction for tourists. It will form not only a beautiful background, but a monument to San Francisco's romantic and historic Chinatown, the largest Chinese settlement outside of Asia. It will bring business to both the Chinese and white merchants of San Francisco. These are benefits in addition to those of health and living standards.

Cooperating in this work have been the Chinese Junior Chamber of Commerce, the San Francisco Junior Chamber of Commerce and the Chinatown Housing Project Committee. This last is composed of members of the Chinese Senior Chamber of Commerce, the Chinese American Citizens Alliance, and the Chinese Consolidated Benevolent Association and represents the elder businessmen of Chinatown.

1939 ENDS WITH BUILDING VOLUME WELL UP

November, usually one of the quietest building months of the year, held up remarkably well, with projects out for bids representing a total in dollars of $4,000,000 over October. The figures quoted are from Architects' Reports, published daily and sponsored by the Northern Section, State Association of California Architects. The figures are not taken from official records, but are secured from authoritative sources in the building centers of Northern California and points south as far as Bakersfield, as well as the State of Utah. They may be accepted as a reliable barometer of actual building conditions in the territory referred to.

Under the heading "Plans In Preparation" the records for the month show a drop of approximately $2,000,000 over the previous month, while under "Projects Out For Bids," as already stated, there was a considerable increase. Much of this work is credited to new Federal housing projects in the Bay region. Under "Contracts Awarded" the totals were also considerably less than the previous month.

The total volume of all work amounted to $31,-117,377. The following is a classification of the three major divisions with totals of the more important items in each:

Plans in Preparation		
Apartments	$ 30,000	
Residences	84,500	
City, County & State	122,000	
Government	50,000	
Schools & Colleges	1,027,000	
Churches, Hotels & Theaters	550,000	
Stores & Markets	26,000	
Industrial	525,000	$ 2,414,500

Projects out for Bids, but not Awarded	
Apartments	$ 5,092,990
Residences	48,550
City, County & State	271,592
Government	18,734,370
Schools & Colleges	317,537
Office Buildings	213,899

Theaters & Churches	134,000	
Stores & Markets	25,000	
Industrial	35,000	24,872,938
Contracts Awarded		
Apartments	$ 164,397	
Residences	460,550	
City, County & State	109,991	
Government	1,017,239	
Schools & Colleges	1,075,020	
Office Buildings	76,290	
Churches & Theaters	133,855	
Stores & Markets	201,800	
Industrial	590,797	3,829,939
Grand Total		$31,117,377

EYES NORTH! TOWARDS THE SCANDINAVIAS

(Concluded from Page 32)

Copenhagen, where a great percentage of 700,000 inhabitants go about on bicycles, is a nucleus of commerce, industry and art. But the observer's eye wanders most frequently to the city's small shops where careful study of details has elevated display methods to an Art. Many of these show Helweg-Moeller's original ability; materials such as corrugated metal and reeded wall surfaces of wood are used decoratively—but only when practical; simple patterns repeated give a certain air of distinction and elegance to otherwise bare rooms. His solution for a temporary building for a large department store is the superlative in practicability and effectiveness. Here great expanses of plate glass, outlined with colored glass tubing, accentuates the merchandise display, and block letters on a continuous corrugated metal fire screen advertises the store itself. Inside this Magazin du Nord the architect tells the story of the growth of the establishment with murals made of odd pieces of cloth, wire and metals. Undoubtedly Denmark's designers strive for perfection in every detail.

And so the last of the Scandinavian countries faded into the background as our ship sailed for Scotland. We had come to love these Scandinavians and to respect their judgment; we admire their progressive spirit and their excellent taste; we appreciate their history and shall watch eagerly their fast-growing place in the modern world.

HOUSE FOR ORTON LUCAS, ORINDA, CALIFORNIA

ENTRANCE HALL AND STAIRWAY

Photo by Waters & Pe

FREDERICK L. CONFER, ARCHITECT

ENTRANCE ELEVATION OF ORTON LUCAS HOUSE, ORINDA

VIEW FROM PATIO

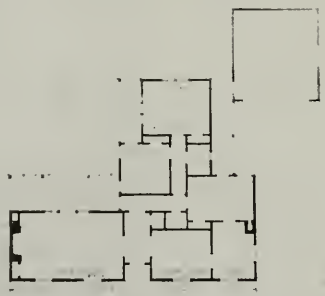
CONVENT AND HOSPITAL FOR SISTERS OF ST. FRANCIS, LA GRANDE, OREGON

ENTRANCE DETAIL, ST. JOSEPH HOSPITAL, FOR SISTERS OF ST. FRANCIS, LA GRANDE

Tourtellotte & Phillips, Architects

Two of four units are illustrated here in connection with a program of expansion and improvement for the Sisters of St. Francis at La Grande, Oregon. These units are the main hospital and convent. Later, a nurses' home and an additional wing for patients will be added. The buildings are constructed of architectural concrete. The corridor walls of reinforced concrete are bearing walls, making the use of solid slab floors simple and inexpensive. The exterior concrete walls are formed against plywood. The coursed ashlar effect was produced by inserting narrow strips of wood on the form faces.

A·RESIDENCE·FOR



PUGET SOUND HOUSE

William J. Bain, Architect

BETTER FOUNDATION ASSURED BY ENGINEERING RESEARCH

By JOEL D. JUSTIN, C. E.

AMERICAN engineers will be able to plan building foundations with greater assurance and economy than at present as a result of investigations of soil testing and sampling methods now in progress.

A comprehensive research project designed to further engineering knowledge of load capacity and settlement resulting under load is being conducted by the Committee on Sampling and Testing of the Soil Mechanics and Foundations Division of the American Society of Civil Engineers in cooperation with other engineering bodies, including United States Army engineers.

Sampling methods employed by engineers throughout the world are being studied and collated under the direction of Dr. M. Juul Hvorslev, research engineer at the Graduate School of Engineering of Harvard University, as the initial step in the program.

The "science of foundations" is vital to millions of people who entrust their lives daily to the validity of the judgment of engineers in planning the foundations of dams, sky-scrapers, bridge piers, tunnels or high retaining walls.

The eventual result of the studies will be the development of superior methods and equipment for obtaining undisturbed samples of soil which will permit the engineer to design his foundations with much greater assurance and economy.

While soil mechanics has advanced rapidly in its approach toward an exact science, it must continue to be at its best a valuable tool in the hands of experienced engineers, for there is a great variety of soils the physical properties of which must be defined before there can be applied the principles of engineering in order to trace the paths and intensities of stress and deformation, as is done with the ordinary materials of construction.

To make tests upon a given soil sample and predict what will be its behavior under a given load, it is apparent that as nearly as practicable an "undisturbed" sample of the soil must be obtained, at whatever depth the information is desired. An absolutely undisturbed sample is unattainable, as no matter what sampling device is used certain compressions and distortions are produced in the sample and the contained water becomes free to travel in the sample and alter its state from the original condition in the ground before any disturbance occurred. All that can be accomplished is to devise the sampler which will produce the least distortion and to try to account for the effect of such distortion by proper correction in following through the laboratory tests.

Well equipped laboratories now have the equipment to test a given soil sample as to its physical make-up, shearing strength, permeability, porosity, water contact and consolidation under known load intensities, both in amount and in time required.

Since the earliest ages man has recognized that any structure was as good as its foundation, but no better. Hence the importance attached by laymen as well as engineers to securing an adequate foundation, else of course, damage and disaster are bound to result.

The taking of surface samples involves simply the removal without disturbance of a section of the soil in a metal or paraffined paper cylinder, the filling of the space between sample and sides of cylinder with melted paraffin and the sealing of the ends with paraffin. The cylinders are provided with caps which may be taped on tighty.

The usual procedure in obtaining undisturbed samples at great depths, such as 100 to 200 feet or more, is to put down a drill hole with casing exactly as when drilling a well. As the hole progresses, at the levels desired, the drill is removed and a sampler tube is lowered into the hole and forced into the undisturbed material just beyond where the drilling has stopped.

Many variations of samplers are in use, from one and one-half inch in diameter to five inches in diameter. Some samplers consist of a solid tube of thin metal which may be cut into desired lengths for tests, while others are split samplers, held together during the taking of a sample by end connections. Upon withdrawal the sample can be freed by removing the split halves. In some cohesionless materials it is necessary to provide springs or fingers at the bottom end of the samplers to prevent the sample from falling out.

The length of samplers varies from three to twenty times the diameter. In certain soils it becomes necessary to obtain the sample by rotary movement of the sampler, in order not to distort the sample. In general the sampler is forced into the soil by ramming, lever, block and tackle or by the use of the hydraulic jack, which gives the least disturbing motion.

Another very interesting type of sampler is that known as the Piggot Gun. The upper part of the machine is a heavy metal base or "gun" containing a charge of explosives, which is fired when the sampling tube is dropped against the ground to be sampled. The explosion fires the sampling tube, which may be several feet long, like a projectile into the soil. The speed with which this sampling tube is projected appears to cause much less distortion of the sample, than is the case with slower methods of driving, or forcing, a sampler into the soil.

The Piggot Gun is used for obtaining deep submarine samples from the ocean floor. A winch lowers the gun and tube by means of a light, strong cable to the bottom of the ocean. Samples have been obtained at depths as great as 17,000 feet. Such deep sampling is naturally of a scientific interest only when studying the geology of ocean deposits.

It is axiomatic that problems relating to foundations, allowable bearing loads, and allied questions concern most vitally the engineering profession and are the first in line for consideration in any undertaking, but it is probable that the general public appreciates few of the many difficult explorations, tests and problems encountered in securing data upon which to base a correct and safe decision.

The science of foundations has developed through the centuries. Each departure from construction precedent has added to the knowledge as to load capacity of soils and settlement resulting under load. From the many structures of known weight on various classes of soils there has resulted an immense fund of statistics of successful and unsuccessful foundation loadings, together with settlement occurring under given conditions.

Most of the tables of allowable soil loadings had their origin in these records as necessary precedents. That the use of such tables involves a comparison as to similarity of the foundation problems goes without saying. It must be admitted that the greater part of the world's heavy foundations, until the past twelve or fifteen years, have been determined on an empirical or precedent basis, relying on the opinion of well established foundation experts as the best guarantee against failures.

Beginning about fifteen years ago, soil and foundations on soil have come to be regarded as matters suitable for experimental testing, somewhat like other construction materials. The general name applied to this relatively young science is "soil mechanics."

EXPERTS DISCUSS WAR'S AFFECT ON BUILDING

THE building industry as affected by the European War and the possibilities of further stimulating construction as a national economic requirement, were subjects reviewed at the recent Construction Industry Conference held by the National Chamber of Commerce in Washington, D. C.

Trade associations in the construction field were represented by more than 400 delegates, together with spokesmen for labor and financing organizations. The session was opened by John W. O'Leary, chairman of the executive committee of the National Chamber, who stressed the need for joint action on the part of construction industries and local business groups in solving common problems.

The conference brought out the fact that for the first time the United States is approaching a period when the number of necessary replacements of old and obsolete structures is becoming a large item. During the coming decade, with particular reference to residential building, the replacement of structures which during the year became 75 years old, will require about 50,000 units annually. If we are to replace each year half of the structures built 50 years ago, there will be required about 150,000 units annually. These figures are in addition to the requirements of more than 45,000 units yearly to meet the needs of the annual increase in families. In the immediate future we will thus begin to feel the effects of the obsolescence of houses built in the United States during the period of rapid urban growth beginning in this country about 1880. If the obsolete structures unfit for habitation are condemned by local authorities, it is possible that within the next few decades the replacement needs characteristic of a mature economy may be approximately equal to the needs which may arise from any increase in population or families.

Criticism of the construction industry was answered at the first session of the conference by I. N. Tate, of St. Paul, vice-president of the Weyerhaeuser Sales Company, who said in part:

"Let us admit freely that in our industry, as in every industry, there are probably manufacturers who are more interested in the profits of the immediate sale than they are in the service their product will give through the years. I have been in the industry all my life and I do not know of any places where there are today conspiracies in restraint of trade, illegal price fixing, collusion among contractors or distributors of building materials; but let us admit that they probably exist—we have been told so very positively—and let us as freely welcome the full light of publicity on them, to the end that these dark spots may be cleaned up and may be kept clean; that there may be no barriers anywhere in the land to the building of the best American home that Yankee ingenuity and intelligently applied research and science can devise. And to the delivery of that home to the American people at the lowest possible price and on the most favorable terms."

E. P. Palmer, of Senior and Palmer, New York City, pointed to the possibility of reviving private construction by developing low cost housing. Although population growth is slackening, he said, there are always frontiers for daring and hardy men to conquer.

Walter R. McCornack, dean of the School of Architecture of the Massachusetts Institute of Technology, said that present housing and slum clearance projects are not helping the lower third of the population, but the middle third. A large proportion of the lower third, he said, cannot pay more than thirty dollars a month and effort should be directed to providing housing at a cost of $300 per room or $1,500 for a house.

The possible effects of the European war on construction in this country was considered. Thomas S. Holden said that the menace of rapidly rising prices seemingly had been averted which he considered an encouraging omen for private construction. The war, he said, was likely to affect publicly financed building more than private construction in that deficit spending probably will turn to defense.

Melvin H. Baker, of Buffalo, President, National Gypsum Company, said that any increase in domestic business activity, due to whatever cause, would help building. He called attention to the fact that three months after the war began there had been no appreciable effect of the war except a slight stiffening of prices. He thought domestic factors of far more importance than foreign influences.

C. G. Conley, President, Mount Vernon Bridge Co., Mount Vernon, Ohio, continued the discussion on "How the War is Affecting Construction." He said:

"It is too early to clearly determine what effect, if any, the war is having on construction. We are interested in promoting construction work, therefore, it is up to us to determine the best policy to pursue so that the war does not adversely affect the construction industry.

"I think everyone will grant that it is very much to the interest of the construction industry in this country that we do not get into the war. With that granted, we are ready to consider how to get the maximum benefit, or perhaps better suffer the least damage.

"War has two economic effects: (First) It raises prices. In other words, it produces an inflation. This has always seemed necessary in order to increase the production to enable a country to successfully wage war.

"(Second) A great deal of the accumulated savings is shot away. In other words, there is a wholesale destruction of property.

"Our problem now is to deal with these two things so that they affect construction the least.

"I do not believe that we of the Construction Industry will benefit by such an increase in prices of War Goods as to promote construction of new facilities to produce those goods. As I see it, we should use every means to avoid just that thing because that policy would be like "killing the goose that lays the golden egg."

"Let us look just a few months in the future and we will see that raising of prices of both material and labor will result in a further lessening of the demand for construction, and we will then have in a very short time another depression to face, and a depression seems to me to be only a time when we pay for the rioting of the night before.

"Now, how can we avoid the second point, which is the destruction of property? It seems to me that all we can do is to localize the destruction and keep the destruction as far from our shores as possible, and in that way we will minimize its effect on us.

"To sum this all up, it is most desirable for the Construction Industry that we do not let this country get into war; that we keep the war as far from our shores as possible; and that we do everything we possibly can to promote keeping all industry on a sane and level base; and that we keep prices of materials, labor and all commodities from any further inflation.

"By doing these things, construction will help to promote more construction and more stable employment for all those connected with our industry."

Apprenticeship training was given attention at a dinner meeting, where representatives of employers, employes and government training services discussed possibilities of bringing about improved methods. A representative of the Associated General Contractors declared that a building boom would disclose a lack of workers throughout the building trades.

A discussion of prices brought from Robert W. McChesney, of Washington, the statement that at the present time many contractors are unable to procure on material a guaranteed quotation for a proper length of time on a specified job. Responsibility for maintaining reasonable prices, however, he said, rests in time of uncertain market conditions, also on the purchaser, who should give a guarantee that he will carry out his duties under contract.

Jurisdictional disputes came before the conference in an address by John Coyne, president, Building and Construction Trades Department, American Federation of Labor, who expressed the belief that jurisdictional differences would be eliminated eventually through the use of new machinery now in operation for dealing with them.

With the Architects

JUNIOR COLLEGE BUILDINGS

Plans have been completed and contracts awarded for a group of college buildings at Visalia by H. L. Gogerty of Hollywood. The buildings, consisting of administration unit, library, science, classrooms, shops and gymnasium will be of steel and reinforced concrete and will represent an expenditure of $350,000.

OAKLAND HOUSING PROJECT

Bids have been taken for Oakland's first Federal housing project, consisting of 154 dwelling units in the block bounded by 8th, 10th, Campbell & Willow Streets, and estimated to cost $800,000. The associated architects are Miller & Warnecke, John J. Donovan, Hugh C. White, F. H. Reimers and H. A. Minton.

NEW HIGH SCHOOL UNITS

New units, consisting of shops and commercial building, for the University High School at Berkeley, are under construction from plans by W. G. Corlett and Henry H. Gutterson, associated architects. Contracts amounting to $335,000 have been awarded.

PALO ALTO APARTMENT COURT

An apartment court, consisting of five units of five rooms each, is to be built in Palo Alto from drawings by Arthur D. Janssen of Atherton. Cost is estimated at $18,000.

ALAMEDA STORE BUILDING

Plans have been completed in the office of Kent & Hass, 525 Market Street, San Francisco, for a one-story reinforced concrete store building, 40 x 96 feet, to be erected on Encinal Avenue, near Morton Street, Alameda, for an unnamed client.

DRIVE-IN MARKET

Construction is under way for a drive-in market at 16th and "O" Streets, Sacramento, for the Safeway Stores, from plans by Herbert Goodpastor, Mitau Building, Sacramento. The improvements will cost $14,000.

PIONEER ARCHITECT STRICKEN

Albert Farr, pioneer architect of San Francisco and senior member of the firm of Farr and Ward, was stricken in his office the early part of this month and taken to a hospital where his condition is reported to be as well as could be expected.

LOS ALTOS RESIDENCE

A $9,000 residence has been designed by Charles S. McKenzie, Twohy Building, San Jose, for H. B. Kenyon of that city. The house is to be in Los Altos.

ARCHITECT-ENGINEER IN AIRWAY TALK

Willis C. Lowe, formerly a practicing architect in Oakland, and now associated with Pan American Airways, Pacific Division, in charge of the design and construction of housing, water system, sewerage systems and airport facilities, was principal speaker at the December 19th annual meeting of the San Francisco Section, American Society of Civil Engineers. The meeting was held in the Engineers' Club following the annual dinner and election of officers. Lowe's subject was "Stepping Stones Across the Pacific." Attractive color films were shown to illustrate the talk.

WILLITS RESIDENCE

A $10,000 house of nine rooms has been designed by C. A. Caulkins of Santa Rosa for Dr. Robert Smalley of Willits. Construction will be frame with stucco exterior and composition roof.

PIEDMONT RESIDENCE

Construction will go forward at once on a six-room $9,000 house in Piedmont for H. P. Fisher, 376 17th Street, Oakland, from plans by Architect W. E. Schirmer, of Oakland.

SAN MATEO DWELLING

Dr. Alan Benner of 630 Hayne Road, Hillsborough, will build a $9,000 home in San Mateo from plans by Leo J. Sharps, 1317 Howard Avenue, Burlingame.

MODESTO RESIDENCE

A seven-room dwelling to cost $10,000 has been designed by G. N. Hilburn of Modesto, for Rex T. Kearny. The plans call for a one-story frame, stucco and brick veneer house with gas hot-air heating, shake roof and steel sash.

STORE BUILDING REMODEL

New work in the office of Harold H. Weeks, 593 Market Street, San Francisco, includes a $14,000 remodeling project of a Turlock store building and alterations to a $4,000 residence for Mrs. Charles Geer in the same town.

SCHOOL BONDS VOTED

Bonds for $130,000 have been voted for new units, including classrooms and gymnasium, to the Shasta Union High School at Redding. Construction is expected to go forward immediately. Charles F. Dean of Sacramento is the architect.

D. EVERETT WAID

Dean Everett Waid, distinguished architect of New York City, died at his home at Old Greenwich, Connecticut, on October 31 at the age of 75, following an illness of several months.

Mr. Waid, a fellow and life member of The American Institute of Architects, served as its president from 1924 to 1926.

His firm has to its credit an impressive array of America's outstanding architectural accomplishments in the field of colleges and other institutional and public buildings. The Metropolitan Life Insurance Company building in New York stands as a notable example of his work.

He founded the Waid Scholarship, contributed to the restoration of The Octagon Building in Washington and made possible many of The Institute's accomplishments.

OFFICE BUILDING

A one-story frame and stucco office building for the San Francisco Memorial Columbarium has been designed by Architect Albert R. Williams, 251 Post Street, San Francisco.

MUNICIPAL BATHHOUSE

Drawings have been completed and a contract awarded for the erection of a frame and brick municipal bathhouse in McClatchey Park for the City of Sacramento. Starks & Flanders are architects for this $40,000 building.

SAN FRANCISCO RESIDENCE

Plans have been prepared for a $20,000 dwelling to be built in Normandie Terrace, San Francisco, for R. W. Samson, Gardner A. Dailey, architect.

FURNITURE STORE BUILDING

A two-story reinforced concrete furniture store building is under construction at Salinas from plans by Architect Charles E. Butner of that city. Louis Gross is the owner.

RETURNS TO PUGET SOUND

Norman E. Fox, architect, recently returned to Seattle after spending several months at Bakersfield where he was associated with Frank Wynkoop, who was formerly on the staff of the late Robert C. Reamer of Seattle. Mr. Fox is now with Henry Bittman and associate, Harold Adams, in Seattle.

OPENS SEATTLE OFFICE

Donald E. Roberts has opened an office for practice of architecture at 1014 Lloyd Building, Seattle. He was recently with V. W. Voorhees, 220 Lloyd Building.

WAR'S INFLUENCE ON ARCHITECTURE

War is generally a spur to the construction of large-scale housing projects, according to Dr. Paul Zucker, professor of the history of architecture at Cooper Union.

"Marriages, the foundation of families, tend to increase during times of warfare, interest in a home-like environment is stimulated, and people, for the most part, become more willing to dispense with luxury and small conveniences in order to have their own homes," declares Dr. Zucker. If America is successful in maintaining its neutrality it is probable that housing after the war will receive an impetus from the government, Dr. Zucker says, which will be seeking a means of absorbing the vast number of workers who during the conflict will be employed directly or indirectly with the munitions industries and other enterprises furnishing materials for the belligerents. Any kind of government aid for building, he adds, will be one of the relatively easiest and most practical ways of solving the unemployment problem here when peace is declared.

Basing his opinion on experiences in post-war Germany where he was dean of the faculty of fine arts in the University of Lessing, Berlin, and professor of the history of architecture at the State Academy for the Figurative Arts from 1918 until 1933, when he lost both chairs with the advent of the Nazi regime, Dr. Zucker asserts that the inertia created by the indifference of people toward large-scale housing programs, is greatly decreased by the psychological and sociological influences growing out of war.

Following the World War, the strengthening of organized housing was apparent in almost every European country, he points out. This was true of countries neutral during the struggle as well of the belligerents.

"Projects were usually supported by state funds," Dr. Zucker continues, "although private enterprise, aided by state loans at low rates of interest, took some part. Appropriation of money for housing was facilitated, and prosecution of the work made simpler, because the governments were spending so much for demobilization that budgets for building seemed almost insignificant by comparison. Also, every kind of regimentation and standardization was easier to bear as the people had become disciplined to it by the measures of the war."

Stylistically, architecture is influenced by war in two ways, Dr. Zucker says, first by the advent of a new ruling class, and second by the difficult economic situation, a result of the cost of the conflict.

"Social revolutions and shiftings of the different social strata which are inevitable after war automatically bring modifications in formal expression. The new ruling group usually strives to emphasize and accentuate its rise to power by incorporating pomp and pretension in its buildings and homes. It is an effort of the

group to prove its adaptation to a higher place in the social order. The pomp and pretension are substitutes for the lack of a former heritage.

"In direct contrast, many people, following a war, who either as the result of the death of their supporter, or for other reasons, find it necessary to modify their style of living, try to substitute for the richness of their former environment by turning to simpler, more modern and functional forms of architecture.

"These two distinct trends in architecture characteristic of the aftermath of war are indicated, although the formal development of style in post-war eras is opposed by a reluctance to experiment, by a certain feeling of tiredness and by a preference for the old-homey childhood forms of architecture.

"In general, architecture has been and always will be the least changeable branch of the arts. There is a difference in the rapidity by which the various fields of art are affected by war. On one extreme we have the written word, or literature, on the other, architecture. The financial investment necessary in building and the heavy, complex character of materials employed are all in opposition to any sharp variation in the slow, methodical development of architectural style."

CRAFTSMEN TO HOLD EXHIBITION

Members of the Washington Craftsmen Guild will hold their first semi-annual exhibition in mid-January, in the Metropolitan Center, Seattle, according to B. Dudley Stuart, guild secretary, 505 Fourth and Cherry Building, Seattle. The display will include skilled work produced by craftsmen throughout the state of Washington. Another exhibit is scheduled for April.

U. S. HOME BUILDING COSTS

With last year accounting for the biggest drop in U. S. home building costs in over 9 years and recent surveys showing no cost increases, and a strong favorable building and business outlook operating, home building prospects this winter are bright in the opinion of W. H. Lowe, president of The Paraffine Companies, Inc.

The cost per person supplied with new housing in the U. S.'s largest cities has gone down substantially since 1930, the year regarded by experts as normal.

Steadiness in material prices and labor rates and use of improved tools and efficient methods, have prevented an increase since 1938, latest period for which complete figures are available.

Lower selling and lot costs and profits also kept prices to buyers down.

	Cost per Person Supplied with New Housing			Change in Cost Per Person Supplied 1938-1937	Percentage Change in Cost Per Person Supplied 1938-1937	Change in Cost per Person Supplied 1938-1937	
	1930	1937	1938			Cost	Percentage
Los Angeles, Calif.	709.40	900.06	824.75	—75.31	—8.36%	+115.35	+16.26%
Oakland, Calif.	796.92	1,054.14	1,043.33	—10.81	—0.5 %	+246.41	+30.9 %
Portland, Oregon	1,094.28	1,024.48	1,119.40	+94.92	+9.3 %	+ 25.12	+ 2.29%
San Diego, Calif.	878.70	759.50	754.11	—14.39	—1.9 %	—133.59	—15.2 %
San Francisco, Calif.	1,035.84	1,024.53	990.39	—34.14	—3.33%	— 45.45	— 4.38%
Seattle, Wash.	837.20	971.44	919.44	—51.81	—5.33%	+ 82.24	+ 9.8 %

(Statistics based on Dept. of Labor & Census Bureau reports)

HEAT WITH TRAPPED SUN RAYS

Dr. Godfrey L. Cabot's gift to Massachusetts Institute of Technology of about $650,000 stipulated its use "for research on the utilization of solar radiation for the tasks of man." So M. I. T. has built an experimental house to try several types of heat traps to store energy in the basement.

Prof. Hoyt C. Hottel is in charge and he proposes to experiment with several types of heat traps or energy collectors. One scheme is to place in a recess in the building roof a shallow, box-like device whose bottom is a thin sheet of metal, painted black to absorb as much of the sun's heat as possible. Firmly fixed to the bottom is a series of small, thin-walled metal tubes heated by contact with the sheet, the heat passing on to water circulating through the tubes. The box has a series of glass covers separated by dead air through which nearly all the sunlight passes and from which heat cannot escape back to the outside. The sunlight is converted to heat as it strikes the metal sheet. There is a layer of mineral wool beneath it to prevent heat escape in that direction.

Carefully insulated tubes carry the warm water in coils to an insulated storage tank where the aim is to keep the water hot anywhere from a few weeks to six months, depending on the size of the tank. The size of units to be used is not yet determined. A large sunlight trap, one big enough to heat the house directly, will need a smaller storage tank, while a small collector, trapping heat all summer with a huge tank, should be capable of hoarding an entire winter's supply of heat.

Prof. Hottel says that the amount of solar heat in New England would make heating by this method uneconomical there, but that there is sufficient sunshine in New England to test the efficiency of heating systems for those localities where the climate is less rigorous.

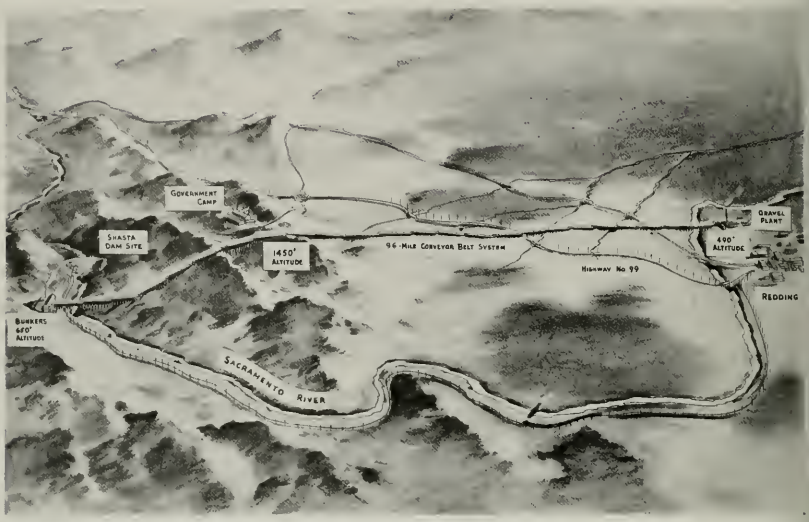
—Bulletin Illinois Society of Architects.

Solar heating has been used more or less successfully in California for 30 years.—Editor.

TEST FOR ENGINEERING DRAFTSMEN

A U. S. civil service examination for senior and junior engineering draftsmen with a salary of $2300 a year, will be held early next year. Applications must be filed with the U. S. Civil Service Commission, Washington, D. C., not later than January 5.

WORLD'S LONGEST CONVEYOR BELT



SKETCH SHOWS PROPOSED PATH OF 9 MILE CONVEYOR SYSTEM FROM REDDING TO SHASTA DAM

CONTRACT for manufacture of the longest belt-conveyor system ever installed (9.6 miles from Redding to Coram, California) for use in connection with building Shasta Dam, has been awarded the Goodyear Tire & Rubber Company and currently is in process of production in its Akron factories, for the Columbia Construction Company, Inc., of Redding. The complete system will be twice as long as the largest ever built previously.

Goodyear also announces completion of installation of a mile long belt-conveyor system at Permenente, near Los Gatos, for the Permenente Corporation, which will provide cement for the Shasta Dam project.

The Columbia job will require approximately 20 miles of 36-inch wide, six-ply, long staple cotton, rubber covered belting, weighing approximately 1,500,000 pounds. It will be installed in 26 endless, vulcanized-on-the-job units for a continuous haul of sand and gravel up to six-inch cobble from the Columbia Company's gravel pits at Redding to the working area for the Shasta Dam at Coram. The dam is being constructed as part of the Federal flood control project for the Great Central Valley of California, to harness the waters of the Sacramento River.

Roughly following the general contour of the rolling desert intervening between Redding and Coram, the belt-conveyor will begin its haul at an elevation of 490 feet, carry through a pass at a maximum altitude of 1,450 feet and make delivery to its extreme northern terminal at an elevation of 650 feet.

In operation on its 9.6-mile route the conveyor syste mwill carry the aggregates for the Shasta Dam over the Sacramento River at two points; over one main state highway and five county roads; across four creeks and the main line of the Southern Pacific Railroad.

The 26 links of the system each will be motivated with 200 horsepower electric motors, excepting the three most northern units which will generate power because they are down-grade, or lowering conveyors. The component weight of the material on the slope makes these belts self operating.

Course of the conveyor will be through the middle of an 80-foot right-of-way, cleared through manzanita brush its entire length, and will deviate from a straight line haul at several points to avoid hill tops on a direct line between the gravel plant at Redding and the delivery site at Coram.

Capacity of the system will be 1,100 tons per hour while conveying at a speed of 550 feet per minute. Material in transit will be on the conveyor one hour and 40 minutes between extremities. Four years of operation will be required to meet the total requirements of the dam construction project, estimated at 10,000,000 tons.

ARCHITECTS' BULLETIN

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Northern Section

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State Association Shows Progress

THE 1939 Convention at Santa Barbara appears to have been significant, not so much for any definite actions taken or policies adopted, as for the obvious evidence of continuing and increasing interest in the Association by architects throughout the state—and evidence, therefore, of progress. The vital necessity of organized unity is recognized by the profession generally. Reduced to few, and scarcely audible, are those sceptical doubts of any real value accruing to architects through association.

This increased interest manifested itself in criticisms of the form and methods of our organization. Such criticism is entirely proper in a purely democratic body—which the Association must be to be justified in its existence—and the Convention properly voted for a committee to study the subject and report at the 1940 session.

Every architect in California is affected in this matter.

PRESENT MEMBERSHIP

The Constitution of the Association, as originally adopted and later amended by practically unanimous vote at various conventions, determines the sole qualification for membership as the possession of a State Certificate to practice Architecture. The By-laws limit office tenure to such members as have paid a voluntary subscription for the expenses of the Association, a nominal annual sum to be set by the Executive Boards as a fair equal contribution. Paying members are designated as "active" members.

The membership, therefore, embraces all architects living and practicing in California. This form of organization was adopted both for unity and strength in action, and as being most truly democratic and representative. Just as the voting power of a citizen of the United States does not depend upon his paying a poll tax, so it was thought right for every architect to be able to participate in the determination of policies and actions that concerned his practice and his profession, without having to pay for his voting privilege. Only with such equality was it considered possible to call this the "State Association of California Architects."

A private group limited to members paying set dues, could call themselves "An Association of Architects of California," but certainly not "The State Association," without misleading the public and inviting criticism and antagonism from other architects and other parts of the building industry. This was the main reason that efforts to change the name failed, at several conventions.

No other form of complete and democratic professional unity has yet been proposed, that was satisfactory to convention delegates, or to the Institute Chapters of California. These Chapters could cooperate and coordinate with one State organization, dividing general and local activities efficiently; but not with one or more private groups.

PROPOSED MEMBERSHIP

A committee authorized by the Convention is to report changes in the Constitution and By-laws, to "Eliminate the non-paying membership and further limit membership to those engaged in the field of architec-

ture as their principal vocation." The objective is, to "strengthen and make a truer association of architects who are interested in being a part of it and each doing his share. The payment of dues implies a personal recognition and acceptance of a relationship that before had only been artificially assumed."

The inference is that all dues-paying members of organizations take interest and active part therein.

It is not quite clear what is meant by the second proposed limitation. Would this shut out architects engaged in State or Federal work, or educational work, or retired from active practice? In that case, a large amount of intelligence, influence, and unprejudiced, almost impersonal interest in the cause of architecture would be lost to the counsels of the Association.

SUGGESTIONS IN ORDER

The committee will clearly be required to study the whole problem carefully and thoroughly before it can recommend a change in the Constitution that will be workable and acceptable to all members. A Convention vote, unless District delegates or Advisors are instructed in advance, will not necessarily represent the opinion of the entire present membership. This lack of representation is one weakness of our Constitution, and a change along the lines of the A.I.A. system of elected delegates and votes allotted per district and per numbers may well be considered, with arrangement for representation by proxy if no delegate from a district can attend the Convention.

The same point of view may apply to the system of electing Association officers and directors, which will also be studied by the new committee. Certainly all the Institute Chapters, and the State Board of Architectural Examiners, should be represented on the Executive Boards, if the present desirable condition of mutual coordination is to be maintained. It is the right and the responsibility of every architect registered in California to give serious and open-minded thought to this vitally important matter of organization and representation, and communicate his views to the committee, either through District meeting discussion and vote, or directly, through the Association office.

LEGISLATIVE PROGRAM

The Convention authorized the appointment of a continuing Legislative Committee of four, with staggered 2-year terms, to study our legislative activities. In time of peace, prepare for war. This preparedness policy is not new. A difficulty always encountered has been the delay on the part of the State Board of Architectural Examiners in determining definitely and completely just what changes in our Act they desired, to facilitate its enforcement. The new committee may be able to remedy this situation.

Some members have expressed the opinion that the best way to secure passage of a satisfactory Act would be to inform and educate local citizens and bodies of citizens—"constituents"—rather than try to convince legislators personally. Politicians, it has been said, have to perform the strenuous exercise of straddling a fence while keeping their ears to the ground. They are bound to pay much more attention to requests or recommendations from their constituents, on whose votes they depend for office, than to the arguments of any special class or organization.

SCIENCE IN INDUSTRY

From a recent article by Dr. Arthur Compton, winner of the Nobel Prize for Physics, we quote a pertinent paragraph:

"We must learn to work together. Without cooperation knowledge cannot be made fully effective. If men divide into antagonistic groups, it may become terribly destructive. Viewed from the standpoint of evolution the ultimate growth of social cooperation would thus seem to be inevitable. For those social groups which cooperate are thereby stronger and must thrive in competition with others. Just as the automobile demands sobriety or congested life demands hygiene, so the mutual dependence of a technological civilization implies consideration of the rights of others."

ARCHITECTS TO AID GOVERNMENT

The American Institute of Architects will appoint a "preparedness" committee to devise plans for making the services of the architectural profession available to the Federal Government, it is announced by the new president of the Institute, who elaborates on the subject as follows:

"The road ahead is not clear and the path may be more confused if reason does not prevail. We pray that our country will not be involved by untoward events beyond its borders, but if trouble does come the Institute should be fully prepared to do completely that part it is fitted to do. We shall appoint a preparedness committee to develop means by which the profession shall be made of immediate service to the Government.

"Arranging for the Fifteenth International Congress of Architects, postponed because of the European war, made us conscious that we should strengthen our relations with the architects of the world, and that we should develop our association with them and their architecture more definitely. The disturbances in Europe should not interfere with this plan and we shall study the means of making and bringing about the more intimate and substantial relations.

"Strange as it may seem, members of the Institute who have been very vocal with respect to Federal building programs seem indifferent to the encroachments on their practice by their local, state, and municipal governments, and local corporations, in spite of the fact that these three fields of practice, in the aggregate, constitute a far greater field for architectural practice than all other fields combined. We shall direct our attention to the conditions we find in order

that the rightful business of the practitioners of architecture shall be conserved for them.

"We intend to examine our own house and seek our deficiencies in the services we render, which perhaps cannot be remedied until our objectives and our failures have been clearly defined. We are determined that the profession shall render uniformly and universally better services.

"We shall study seriously whither the long period of preparation for our profession is leading. The opportunities to demonstrate ability in the art of design seem far from commensurate with the many costly years spent in study and the acquirement of knowledge, and the period at which we are permitted to exercise our imaginative efforts is steadily being deferred until it looks as if not long hence many of our profession may be middle aged before they can function as architects.

"We shall continue the studies of the costs of performing the various parts of architectural services, which are directly related to the character and quality of our services. It has been clearly demonstrated that the minimum fees established twenty-five years ago for the profession are not adequate compensation today, especially as it is the tendency of minimum fees, over a series of years, to be considered as maximum fees.

"We expect firmly to encourage all efforts that will make the small house field our own. One of the methods that may lead in this direction has received your approval, and we shall do what we can to prove its usefulness. It is a cooperative effort, and we shall continue our relations of amity and collaboration with the Producers' Council, and endeavor to make that relationship ever more useful to the profession.

"The movement by the whole profession to organize into one national body is profoundly significant. Through the efforts of the State Association Committee, much progress has been made, and its last report to the Board will be the foundation for conclusions that will be presented to a later convention.

"We are aware that this is a serious period for the profession, and that those who conduct the smaller practices in architecture, constituting perhaps 80 per cent of those who practice the profession, are expecting us to give serious consideration to the conditions they are facing. This we shall do.

"The tasks that we have set are not easy of accomplishment, nor can they quickly be brought about. They constitute the realities of the profession, rather than its generalities."

ENGINEER WINS BRIDGE DESIGN CONTEST

William D. Smith, of Portland, Oregon, civil engineer with the U. S. Forest Service, has been named winner of the $500 first prize in a timber bridge design contest sponsored by the American Forest Products Industries, National Lumber Manufacturers Association, and Timber Engineering Company.

The winning entry was a 70-ft. Pony truss bridge, designed for an H-10 loading, with an 18-ft. roadway, and, in the opinion of the judges, best demonstrated the inherent advantages of the use of timber as a structural material.

WILL DESIGN INSURANCE BUILDING

Eggers & Higgins, of 542 Fifth Avenue, New York, have been retained as architects for the new Home Office Building of the companies of The National Fire Group which are the National Fire Insurance Company of Hartford, the Mechanics and Traders Insurance Company, the Transcontinental Insurance Company and the Franklin National Insurance Company of New York. The new building will cost $2,000,000.

NEW TYPE OF AWNING

A Venetian-type awning made entirely of sheet metal is one of the interesting new products on the market. Advantages are said by the manufacturer to include year-round sun protection, full visibility, ventilation and light control.

Another advantage is elimination of the expense and inconvenience of installing, removing, storing, repairing and recovering as in the case of the conventional awning. Metal Venetian-type awnings also are said to reduce concentration of heat around window openings, thus improving ventilation and reducing the cooling load on air-conditioned homes and business buildings.

Shutters of the new awning are made of galvanized paintgrip sheets, which are bonderized at the steel mill by a patented process to take and hold paint.

ICKES SAYS FEDERAL GOVERNMENT IS GOOD TO CALIFORNIA

IN HIS address at the Friant Dam ceremonies, November 5, Harold L. Ickes, Secretary of the Interior, said he hoped California citizens appreciated how much the Federal Government has done for the State in recent years. Extracts of his talk follow:

"When the present blackout of European civilization shall have been dispelled by the light of peace, the water stored and the power generated here will still be needed; the Central Valley, with its two billion dollars worth of improvements, will still be creating wealth for the people. Our Maginot Line of peace will stand as an impregnable fortress against alternating droughts and floods, while under its protection you and your children may confidently work and build and achieve.

"I wonder if the people of California have not come to take the Federal Government too much for granted. One breath-taking public work has followed another in such rapid succession that it would not be surprising if, at times, you should overlook what has already been accomplished because you are so interested in what is being done. Even those of us in Washington who are responsible for carrying out orders sometimes lack comprehension of the mighty sweep of this program. It may safely be said and no Administration in our history, perhaps even no two or three Administrations, has wrought in our land physical improvements comparable in worth, variety and magnitude to those that have been and are being built under the present one. If the citizens of California who are kept busy moving from one such celebration as this to another would sit down with pencil and paper and strike an account of what the Federal Government has done with and for this great State, I venture to say that they would be amazed.

"Central Valley is an inland empire almost 500 miles long and nearly 50 miles wide. It is, as you know, semi-arid, but its soil is as rich and its climate as favorable as any agricultural area in the world. The Valley is surrounded by mountains, except for the narrow gap in the west wall through which the two great rivers, the Sacramento from the north and the San Joaquin from the south, merge to flow into San Francisco Bay. Irrigation has made this Valley the granary of the West and one of the fruit baskets of the world. Its oranges roll into the world's markets. Four fifths of the raisins grown in this country come from here. Here almost a million people have their homes.

Nature has, indeed, blessed this Valley and has provided an abundance of many things. Only sufficient water is lacking. Two thirds of the available water comes from the mountains of the north, while two thirds of the irrigable lands lie in the valley of the south. To add to the paradox, about two thirds of the water falls as rain and snow in the winter when it is least needed, while comparatively little comes from the heavens in the summer and autumn when the crops are thirsty.

"The basic problem for this great Valley, therefore, is so to redistribute the waters as to carry them where, when and as they are needed. On the upper Sacramento River a great dam, the Shasta, is being built. This will regulate that river and will store the spring floods so that water not needed in the Sacramento Valley can be brought into the San Joaquin basin during the summer and autumn. At the same time, the Friant Dam will hold back the waters of the San Joaquin in order to supplement the diminishing supply of this vast southern irrigated area. Excess water from the Sacramento River will be pumped into the northern part of the San Joaquin channel as a substitute for that which will be taken out here. Concurrently, this two-fold redistribution of water between seasons and between river basins will serve many collateral purposes. It is as simple as that, once human ingenuity and enterprise—plus a not inconsiderable sum of money—have set themselves to the task.

"The Shasta Dam will, moreover, flush from the rich delta of the two rivers the salt water which now encroaches from San Francisco Bay in seasons of low flow. It will hold floods in leash and restore and make it possible to extend navigable channels. It will provide a dependable fresh water supply for the farms, industries and cities along the Contra Costa County shore, and, in addition, through the construction of a power plant at its base, it will be able to supply an annual production of a billion and a half kilowatt-hours of low cost hydro-electric energy.

"On account of certain misconceptions which exist in some parts of the country, although they are rapidly being allayed, perhaps I should say a few words about the financing of water conservation projects. Although the initial investment is necessarily made by the National Treasury, such projects will ultimately pay for themselves through charges collected for the use of water and power, although the rates for the latter will be low indeed when compared with the prices that private utilities exact from the people in all too many instances. Projects of this type are too vast to be undertaken by private enterprise no matter how much initiative it may have. In other words, the Nation makes possible an abundant supply of cheap power, makes productive vast areas of fertile land, checks destructive floods, holds salt water in the sea where it belongs, and gets its money back in the end."

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San ncisco and the Bay District. There may slight fluctuation of prices in the interior d southern part of the state. Freight tage, at least, must be added in figuring intry work.

nd—1½% amount of contract.

ckwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000. carload lots.

LLOW TILE FIREPROOFING (f.o.b. job)

8x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
0x12x12 in.	126.00 per M

LLOW BUILDING TILE (f.o.b. job)

arload lots.

8x12x5½	$ 94.50
0x12x5½	73.50

ilding Paper—

ply per 1000 ft. roll	$3.50
ply per 1000 ft. roll	5.00
ply per 1000 ft. roll	6.25
sulkraft, 500 ft. roll	5.00
ash cord com. No. 7	$1.20 per 100 ft.
ash cord com. No. 8	1.50 per 100 ft.
ash cord spot No. 7	1.90 per 100 ft
ash cord spot No. 8	2.25 per 100 ft
ash weights cast iron, $50.00 ton.	
ails, $3.50 bsse.	
ash weights, $45 per ton.	

ncrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
op sand	$1.45	$1.85
oncrete mix	1.45	1.85
rushed rock, ¼ to ¾	1.60	2.00
rushed rock, ¾ to 1½	1.60	2.00
oofing gravel	1.60	2.00
ity gravel	1.45	1.85
ver sand	1.50	1.90

elivered bank sand—$1.00 per cubic yard at bunker or delivered.

ND—

	Bunker	Delivered
ver sand	$1.40	$1.80
ipis (Nos. 2 & 4)	2.00	2.40
lympia Nos. 1 & 2	1.80	2.20
ealdsburg plaster sand	$1.80 and $2.20	
el Monte white	.50c per sack	

MENT (all brands, cloth sacks) $2.72 per bbl. b/b car.; deliv. $2.90 per bbl., carload lots; ss than carload lots, warehouse or delivered, c per sack. (Less 10c per sack returned, 2% ish Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White { 1 to 100 sacks, $2.00 sack, warehouse or delivery; over 100 sacks, $1.25; 2% discount 10th of month.

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.

(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	13/16x2¼" T&G	⅜x2" T&G	½x2" Sq. Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$133.50 M
Sel. Otd. Oak	118.00 M	101.00 M	106.50 M
Clr. Pla. Oak	120.00 M	102.00 M	107.50 M
Sel. Pla. Oak	113.00 M	92.00 M	99.50 M
Clr. Maple	124.00 M	105.00 M	

Wage—Floor layers, $10.00.

Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron — Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$36.00 per M
No. 2 common	29.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	26.00 per M
1x4 No. 2 flooring VG	60.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	65.00 per M

Slash grain—

1x4 No. 2 flooring	$43.00 per M
1x4 No. 3 flooring	40.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.20 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded) 5/16" 3-ply and 48"x96" $32.50 per M

"Plywall" (wallboard grade)—¼" 3-ply 48"x96" $38.50 per M

"Plyform" (concrete form grade)—⅝" 5-ply 48"x96" $110.00 per M

Exterior Plywood Siding—

7/16" 5-ply Fir	$ 90.00 per M
Redwood	$100.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W. $90.00 per 1000 (delivered).

Double hung box winaow frames average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot

Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average) $17.50 per M.

For smaller work average $35.00 to $45.00 per 1000

Marble—(See Dealers)

Painting—

Two-coat work . . . . . per yard 42c
Three-coat work . . . . . per yard 60c
Cold water painting . . . . . per yard 10c
Whitewashing . . . . . per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.60
2 coats, lime mortar hard finish, wood lath	.70
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	1.10
Ceilings with ¾ hot roll channels metal lath plastered	1.85
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.80
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.10
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.40

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50
Wood lath, $7.50 to $8.00 per 1000.	
2.5-lb. metal lath (dipped)	.17
2.5-lb. metal lath (galvanized)	.20
3.4-lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.28
¾-inch hot roll channels, $72 per ton.	
Finish plaster, $18.90 ton; in paper sacks.	
Dealer's commission, $1.00 off above quotations. $13.85 (rebate 10c sack).	
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15	
Lime, bulk (ton 2000 lbs.), $16.00 ton.	
Wall Board 5 ply, $50.00 per M.	
Hydrate Lime, $19.50 ton.	
Plasterers Wage Scale	$1.87 per hour
Lathers Wage Scale	1.50 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to orade, quantity and runs.

Roofing—

"Standard" tar and gravel, $6.50 per sq. for 30 sqs. or over.
Less than 30 sqs. $7.00 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Copper, $16.50 to $18.00 per sq. in place.
Cedar Shingles, $8.00 per sq. in place.
Re-coat, with Gravel, $3.50 per sq.
Asbestos Shingles, $15 to $25 per sq laid.
Slate, from $25.00 per sq., according to c and thickness.
Shakes—1x25" resawn . . . . . $11.50 per
½x25" resawn . . . . . 10.50 per
½x25" tapered . . . . . 10.00 per
Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardwa $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is average for comparatively small qu tities. Light truss work higher. Pl beams and column work in large qu tities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in pla
Sandstone, average Blue, $4.00, Bo $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. place.

Store Fronts—

Copper sash bars for store fronts, corn center and around sides, will avera 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.—(See Deale Asphalt Tile—18c to 28c per sq. ft. stalled.

Wall Tile—

Glazed Terra Cotta Wall Units (single fac laid in place—approximate prices:

2 x 6 x 12	$1.00 sq.
4 x 6 x 12	1.15 sq.
2 x 8 x 16	1.10 sq.
4 x 8 x 16	1.30 sq.

Venetian Blinds—

40c per square foot and up. Installati extra.

THE BUILDERS' EXCHANGE OF SAN FRANCISCO STANDARD WAGE SCALE

For mechanics employed on construction work in the Bay Region. Effective September 1, 1937

CRAFT	Journeymen Mechanics
Asbestos Workers	$ 8.00
Bricklayers (6h-5d)	10.50
Bricklayers' Hodcarriers (6h-5d)	6.75
Cabinet Workers (Outside) (5d)	8.00
Caisson Workers (Open)	6.40
Carpenters (8h-5d)	10.00
Cement Finishers (8h-5d)	10.00
Cork Insulation Workers (8h-5d)	9.00
Electric Workers (8h-5d)	11.00
Electrical Fixture Hangers	8.00
Elevator Constructors	10.40
Engineers, Portable & Hoisting	9.00
Glass Workers (8h-5d)	9.68
Hardwood Floormen	9.00
Housesmiths, Architectural Iron (Shop) (8h-5d)	9.00
Housesmiths, Architectural Iron (Outside) (8h-5d)	10.00
Housesmiths, Reinforced Concrete or Rodmen (8h-5d)	10.00
Iron Workers (Bridge and Structural) Including Engineers (8h-5d)	12.00
Laborers, Building (8h-5d)	$ 6.00
Laborers, Common (8h-5d)	6.00
Lathers, Channel Iron (6h-5d)	9.00
Lathers, All Others	9.00
Marble Setters (8h-5d)	10.50
Marble Setters' Helpers (8h-5d)	6.50
Millwrights	9.00
Model Makers ($1.50 per hr-6h)	9.00
Modelers ($2 per hr-6h)	12.00
Model Casters	7.20
Mosaic and Terrazzo Workers (Outside)	9.00
Painters (7h-5d)	8.75
Painters, Varnishers and Polishers (Outside)	8.75
Pile Drivers and Wharf Builders	9.00
File Drivers' Engineers	10.00
Plasterers (6h-5d)	10.00
Plasterers' Hodcarriers (6h-5d)	7.50
Plumbers (8h-5d)	11.00
Roofers, Composition (8h-5d)	9.00
Roofers, All Others (8h-5d)	8.00
Sheet Metal Workers (8h-5d)	10.00
Sprinkler Fitters	10.00
Steam Fitters (8h-5d)	$1
Stair Builders (8h-5d)	9
Stone Cutters, Soft and Granite (8h-5d)	8
Stone Setters, Soft and Granite	12
Stone Derrickmen	9
Tile Setters (8h-5d)	11
Tile Setters' Helpers (8h-5d)	6
Tile, Cork and Rubber (8h-5d)	9
Welders, Structural Steel Frame on Buildings	11
Welders, All Others on Buildings	9
Dump Truck Drivers, 2 yards or less	6
Dump Truck Drivers, 3 yards	7
Dump Truck Drivers, 4 yards	7
Dump Truck Drivers, 5 yards	7
Dump Truck Drivers, 6 yards	7
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	6
3 yards	7
4 yards	7
5 yards	7
6 yards	8

GENERAL WORKING CONDITIONS

1. Eight hours shall constitute a day's work for all crafts except as otherwise noted.
2. Plasterers' Hodcarriers, Bricklayers' Hodcarriers, Roofers' Laborers, and Engineers, Portable and Hoisting, shall start 15 minutes before other workmen, both at morning and at noon.
3. Five days, consisting of not more than eight hours a day, on Monday to Friday inclusive, shall constitute a week's work.
4. Transportation costs in excess of twenty-five cents each way shall be paid by the contractor.
5. Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturdays (except Laborers), Sundays and holidays, from 12 midnight of the preceding day, shall be paid double time.
6. On Saturday, Laborers shall be paid straight time for an eight-hour day.
7. Where two shifts are worked in any twenty-four hours, shift time shall be straight time. Where three shifts are worked, eight hour's pay shall be paid for seven hours on the second and third shifts, allowing one-half hour for lunch.
8. All work, except as noted in paragraph 9, shall be performed between the hours of 8 a.m. and 5 p.m.
9. In emergencies, or where premises cannot be vacated until the close of business, men then reporting for work shall work at straight tim Any work performed on such jobs after mi night shall be paid time and one-half up four hours of overtime and double time the after, provided, that if a new crew is employ on Saturdays, Sundays or holidays which h not worked during the five preceding da such crew shall be paid time and one-half.
10. Recognized holidays to be: New Year's Da Decoration Day, Fourth of July, Labor Da Admission Day, Thanksgiving Day, Christm Day.
11. Men ordered to report for work, for whom employment is provided, shall be entitled two hours 'pay.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

. PORCELAIN ENAMEL LAMP

LM Standards Institute announces ew lamp and porcelain enamel . A broadside gives full particu- and details the salient features. re are six important points and the specifications will list these. Send ne coupon for your copy.

. OIL BURNERS

\ new and comprehensive booklet been issued by H. C. Little Com- y illustrating the full line of heat- equipment, oil-fired, manufactured this company. Special information the architect is included in this klet.

. NICKEL USES

nternational Nickel Company have ther new edition of "INCO" just the press. These booklet-magazines tain excellent material, illustrations data relative to the use of nickel its various alloys. Send for your y.

. VITREOUS CHINA

\ new vitreous china is described in roadside put out by Crane Com- y. This product is especially adapt- or use in lavatories, sinks and wash ns where a hard glossy surface is ortant. The coupon will bring you plete data.

. HOUSE TELEPHONE

onnecticut Telephone and Electric poration have a product just put the market—a house telephone a pilot light for apartment build- . This is fully described in a broad- by this company.

317. LAMINATED GLASS

A pamphlet from the Pittsburgh Plate Glass Company gives some interesting details on a glass designed to protect documents against ageing. It is known as Hi-Test Laminated Document Glass; send in the coupon for a copy.

318: REFRIGERATION

Worthington Pump and Machinery Company prints a booklet detailing their "Low Pressure Refrigeration Units;" all essential data is included and the pamphlet is well illustrated.

319. GAS ENGINES

The same company have another booklet on "Vertical Four Cycle Totally-enclosed Gas Engines," likewise fully descriptive and illustrated—send for these two by using the coupon below.

320. LIGHTING UNIT

Another lighting unit is described in a small book by Benjamin Electric Manufacturing Company. This one is a fluorescent Unit called "FLUR-O-LITER" and represents a distinctive advancement in the field of modern lighting.

321. SAFETY SEALS

Celotex Corporation has put out a very nice little booklet telling the story of "Safety Sealed Construction" for homes. All pertinent facts and details are contained in this booklet; send for your copy—use the coupon on this page.

322. INSULATING BOARD

A New and More Beautiful Insulating Board is the title of an attractive booklet dealing with this material and put out by Johns-Manville. Illustrations are in color, details complete and concise.

323. XMAS TREE LIGHTING

Pacific Coast Electrical Bureau have a new booklet and as usual it has many interesting features. This one has the title "Seeing Begins With Measured Light." It is a compilation and resume of facts concerning lighting and the illustrations are very complete. The Bureau also has a small booklet just ready for distribution on Xmas tree lighting. Use coupon for a copy.

324. DRAWING MATERIALS

Keuffel and Esser, in a little brochure, illustrate their newest sets of fine drawing instruments and individual instruments. Price lists are included and some facts relative to the manufacture of precision instruments. Send for a copy.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
68 Post Street
San Francisco, Calif.

Please send me literature on the following items as checked below. This request places me under no obligation.

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316 ☐	322 ☐
317 ☐	323 ☐

324 ☐

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U. S. Housing Authority Making Tests to Determine Causes of Cracks

SAVINGS of millions of dollars annually for both private home owners and the vast building industry in general is expected to result from a series of tests being conducted by the United States Housing Authority to determine the cause of cracks in exterior building walls of low-rent projects, should they appear.

The experiments are being made concurrently in Washington and New York City with the cooperation of the National Bureau of Standards and the New York City Housing Authority.

In these tests the USHA is following a policy of using the specialized experience and extensive facilities of its technical organization for the benefit of the American building industry.

While the primary purpose is to reduce maintenance costs on low-rent housing projects on the USHA slum clearance program, the findings should be of great value to all builders and property owners, who spend large sums annually to repair wall cracks and damages resulting from them. This cost may be only $100 to $200 for a one-family dwelling, or run about $1,000 for an average apartment building, but the aggregate for the country is well into the millions.

The tests in New York City are being made on the roofs and walls of the "Red Hook Houses" and the "Queensbridge Houses" low-rent housing projects. Measuring points have been located on roof slabs and exterior walls, where strain guages will record movements of masonry or concrete so slight as one ten-thousandth of an inch. Periodic readings will be taken by the USHA Technical Division during the next year, covering a full cycle of temperature and shrinkage changes in the concrete.

Similar measurements will be made on an experimental building at the National Bureau of Standards in Washington. This is a one-story structure on the same plan and specifications of government project buildings that have developed wall cracks. The New York City and Washington readings will be compared and analyzed.

The most modern scientific equipment is being used in these tests to measure the extent and relation of various factors known or thought to contribute to building movements that are followed by cracks in exterior masonry walls. The factors to be measured include: deflection, shrinkage, and curling of concrete slabs bearing on masonry walls; and the relative thermal expansion and contraction of the masonry walls and the concrete slabs. When these calibrations have been studied, it is expected that they will suggest preventive measures.

NEW GENERAL MANAGER

The appointment of Daniel J. Young as vice-president and general manager of Wheeler Osgood Sales Corporation has been announced by Alexander Baillie, president. He will make his headquarters at the company's Tacoma factory but plans to spend a large portion of his time at the San Francisco, Chicago and New York offices.

Mr. Young, an engineer by profession, has had a widely varied experience in plant operation and corporation management. During the past few years he has been doing special work of this character for the Bank of California. He has become well known in the industry through business associations and his more than 20 years of residence in Tacoma.

CALIFORNIA STATE AMENDMENTS AFFECT CONTRACTORS

The failure of contractors to reduce their verbal contracts to writing is the cause of many of the difficulties between contractors and owners, and/or contractors and subcontractors. In a recent questionnaire to State Inspectors, in which they were requested to give the most common cause of a contractor getting into difficulties, every one of them without exception listed as the first cause the failure to reduce their agreements for extras to writing. The practice of using verbal contracts or poorly drawn written contracts sooner or later invariably results in trouble and complications which are costly to all concerned. If the other party is not willing to put his name on a written contract, assuming it is properly drawn, probably there is something the matter with either the individual or the deal. Have your contracts properly drawn and signed to protect yourself.

* * *

CONTRACTORS' LAW AMENDED

The term "builder" is declared to be synonymous with "contractor" in amendments to the Contractors' License Law passed by the 1939 Legislature and effective September 19.

The exemption of owners who are building upon or improving their own property for their own use and occupancy remains in the law, however, and therefore the change only applies to the so-called speculative builder whose operations must be legalized by possession of a State Contractors' License.

While the Attorney General has on several occasions in the past ruled that the Contractors' Act extended jurisdiction over the builder for speculative purposes, there has been some doubt in the minds of a few prosecuting attorneys on this particular point, and therefore the Act was amended to specifically bring them under the jurisdiction of the Registrar.

* * *

PEST CONTROL OPERATORS

Amendments to the Contractors' Act which became effective September 19, make it no longer necessary for a pest control operator to be licensed as contractor, providing his operations do not include structural work. If structural work is done, he still is classed as a contrac-

Architects Scored for Lack of Technique in Low Rent Housing

THE commonest errors in planning low-rent housing arise from ignorance of the habits, needs, and means of the people who will live in the houses, A. C. Shire, technical director of the United States Housing Authority, says in a symposium on architectural service for public housing projects.

"The average tenant of subsidized housing will earn less than $1,000 a year," Mr. Shire points out. "Apparently an American architect cannot imagine a family income of less than about $3,000 or $4,000. Hence the whole tone of his approach becomes unrealistic. When he gets down to brass tacks he is still several economic strata above reality.

"What hope is there for housing if architects cannot break through their accumulated spiritual cobwebs and meet the need for invention and simplification, finding a new kind of design that is consistent with the new human and physical materials they are working with? It is time architects were more concerned with the real needs of low income families than with charm, symmetry, traditional style, and bourgeois standards.

"Low rent is the sine qua non of subsidized housing and under the United States Housing Authority program low maintenance costs are to low rents what eggs are to an omelette. That is a new idea to most architects; they have been used to thinking of maintenance as a small item compared with interest and taxes.

"The architect of subsidized housing must think of things in the terms of the care they need. And he must see that the maintenance money is spent for things that will make life easier for the tenants. For example, anything that requires periodic painting adds to the rent, and the more elaborate it is the more it costs to paint it, and hence the more it adds to the rent. Naturally, therefore, there should be a minimum of trim and that minimum should be simple.

"What good is a five-member cornice to a woman who has to cook, wash, and otherwise care for a five-member family? What she needs is an efficiently planned place, easily cared for and cleaned, in which to bring up her family. Rooms designed for proper placing of furniture are more important than evenly spaced windows: a surprising number of projects are submitted in which apparently no consideration whatsoever has been given to where people will sit or where beds are to go or where children are to study or play.

"The family wants to look out on trees and shrubs, grass and flowers. But they do not want to watch gardeners cutting the grass, pruning the shrubs, weeding the flower beds, when their rent is helping to pay that gardener's wages. Low-rent housing projects should be laid out for a maximum of tenant use and tenant maintenance instead of being planned and cared for as a show place, a park with 'keep off the grass' signs all about.

"Then there is insistence on banal symmetry, usually in connection with the administration of community building. Or the architect designs row houses to look like a sumptuous Georgian mansion, crowds them on the land, and nearly dies when he learns that tenants hang out their wash and that garbage cans have to be placed somewhere for collection."

Costs are another field in which architects appear to depend upon a general impression rather than upon definite knowledge, according to Mr. Shire.

"A designer must be cost-conscious in drawing every line, and the whole organization of a housing architect's office should be oriented strongly in the cost direction," he declares. "It is not just a lack of definite knowledge of costs, but a lack of definite interest in cost that appears in most of the projects submitted.

"A few dollars saved in each of many hundred dwelling units in a project are used to provide more dwelling units. In public housing projects, the architect is in a position of public trust; his attitude should be one not of mere acceptance of ordinary practice, but of service to the community in seeing that money expended goes towards the purpose of the Act.

"The contract for financial assistance which the local authority enters into with the USHA, and with which is tied the contract between the architect and the local authority, sets a definite upper limit of cost for the project. Yet we often find that when the architect submits the preliminary estimate for approval it shows a total expected cost of more than the maximum amount the local authority has to spend!

"What is the explanation? Is this business of designing for low costs and low rents so different from all the architect's previous training and experience that he has not yet acquired the essential technique? If this is true, perhaps a new type of technical education for architects is necessary."

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tor without regard to any pest control license he may hold.

On the other hand, any contractor or other person for that matter, who is engaged in the business of eradicating or controlling structural pests and growths must be licensed by the Pest Control Board without regard to any other license he may hold.

Furthermore the Structural Pest Control Act provides anyone who offers to do pest control work or who holds himself forth as being skilled in such work for the purpose of certifying to absence of infestation even though he may have done no actual work comes within jurisdiction of the Pest Control Board, and if lacking a license may be proceeded against criminally.

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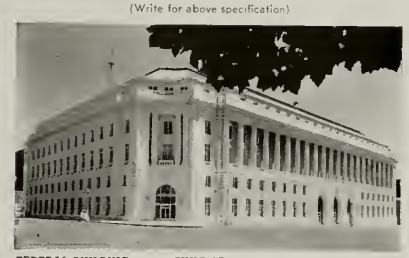

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NORTHERN CALIFORNIA CHAPTER

The regular monthly meeting of the Northern California Chapter, A.I.A., was held at the St. Francis Yacht Club Tuesday, December 5, President James H. Mitchell presiding.

Members present: Messrs. Harris C. Allen, John Bakewell, Jr., Albert J. Evers, Wm. B. Farlow, Edward R. French, Jr., Carl F. Gromme, Andrew Hass, Wayne S. Hertzka, Thomas J. Kent, Wm. H. Knowles, Lawrence A. Kruse, Charles F. Masten, Frederick H. Meyer, Chester H. Miller, James H. Mitchell, Irving F. Morrow, Warren C. Perry, Roland I. Stringham, Ernest E. Weihe, Wm. Wilson Wurster, John Davis Young.

Mr. Mitchell introduced the guests for the evening, Newton Drury, Project Coordinator for the California State Park Commission, and Carl Warnecke, architect of Oakland.

Mr. Meyer told about the program of the San Francisco Chamber of Commerce to repeal the present licensing tax on professions and to enact a more just measure.

Mr. Evers pointed out that the present license tax for architects is in reality a gross income tax, in that it is based upon the gross amount of work performed.

Suggestion was also made that the new licensing act under consideration should really regulate the practice of architecture, and curb the activities of unlicensed men.

Motion by Mr. Meyer, seconded by Mr. Hass: That the Executive Committee of the Chapter shall have authority to take whatever action deemed best, and shall appoint a committee to meet with the San Francisco Chamber of Commerce.

The meeting was then turned over to Wm. H. Knowles, Supervisor for the Historic American Building Survey.

Mr. Knowles described the origin and development of this organization, and told of the work that was being done in measuring and preparing drawings of the various old buildings throughout California. As this work is about to be terminated, he suggested that the Northern California Chapter make a preliminary survey of the needs in this state and submit a proposal to the state officials for a program to further the work and to protect these buildings.

Mr. Drury gave a very interesting description of the restoration activities accomplished to date by the State Park Commission, and also told of the work that is contemplated for the future. He gave a most enjoyable account of improvements at La Purissima Mission near Lompoc, and also of the rehabilitation of the General Vallejo house in Sonoma.

Irving F. Morrow, District Officer for the Survey, spoke entertainingly upon the American style of early California architecture, citing especially the noteworthy examples to be found in the Mother Lode country. His comments upon the type of work found there and the general conditions at that period of history were very enlightening and educational.

After adjournment members visited an exhibition of awings and photographs covering the work of the rvey since 1936.

The exhibition, held in the club lounge, was prepared Mr. Knowles and excited much comment and praise.

—J. D. Y.

EVOLUTION OF THE STORE FRONT

Something radical has been going on, right before ur eyes; and it's very likely you've given it nothing ore than a passing thought at most. And yet, it's also ely that this thing has actually influenced your life—pecially your shopping life. There has been a revolu-on in store fronts. . . .

Hard to believe now as you pass along before glitter-g and polished store fronts, that store windows were ace put there for no other reason than to let the light rough—and perhaps to store some stock in—store, ind you, not display. Why, store windows didn't even ach the dignity of plate glass until the Gay Nineties d that was considered the last word! But some of the ore enterprising merchants turned their store windows om storage places to display spaces.

This was a milestone in the history of the store front. Whereas up until this time the windows had served as ntage points for idle clerks within, people outside ere invited to stop and look IN. Before you knew it, eople who LOOKED in, WENT in; the clerks didn't ve any time to stand around and look out. They had scurry around behind counters and wait upon new stomers.

Eventually, this revolution was carried still further; it read to cover the whole store front. Instead of bricks d clapboard and dingy granite, the shops were essed in glamor. And the more glamorous the fronts ey put up, the more new business they attracted. Of urse, it was up to the merchandise within to hold the stomers; but getting new customers into the store is lf the battle.

You might doubt that a store front would have any-ing to do with the business inside. But you'd be sur-ised. One remodelled store reported that its new ass front helped materially in attracting 22 thousand ople on opening day. Another merchant gave his odernized facade credit for a 75 per cent increase in siness. Of another store that sported a glazed and lished exterior, a customer was heard to say: "Maybe my imagination, but the clerks seem to be more easant in their new store."

So, we'd better grant a store bigger business because its front. Fact is, store fronts probably influence you d me a lot more than we realize.

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for store fronts in the last decade, it can trace its commercial beginnings back to the rest-rooms of one of New York's earliest skyscrapers—the Woolworth Building, built in 1910. And that glass, incidentally, is said to be in as good condition today as when it was first installed.

Later, it was used generally for the familiar white table tops in restaurants. When they found out how to give this type of glass color, new markets were opened, including the store front. Demand went up, prices went down.

These inspiring new materials moved architects to new designs. The business world became decidedly store-front conscious; and the store-front became the subject of a new applied psychology. If the store sells goods, it wants to show some of its goods in ample display space. If it sells SERVICE it must express its character in its facade. Whereas the large store attracts attention by its very size, the small store depends upon showmanship in the design of its front and the materials used there. You see how specialized and complicated the problem of the store front has become.

FELLOWSHIP COMPETITIONS FOR ARTISTS

Announcement was recently made by the Trustees of the Estate of the late Senator James D. Phelan of San Francisco of two fellowships being offered for the year 1940-41, each carrying a stipend of $900. They are made available annually under the terms of a bequest to bring about a further development of native talent in California in the fields of literature and art.

Dr. C. Douglas Chrétien of Berkeley, speaking for the Trustees, called attention to the fact that this year painting will be covered, as well as the usual fields of literature. The latter is limited to fiction, biography, historical narrative, and verse. Writers of the short story will not be eligible to compete.

Applicants for the fellowship, both men and women, must be native born citizens of California, and must be between the ages of 20 and 35. Applications must be made on forms especially provided for that purpose, and may be obtained from the office of the James D. Phelan Award in Literature and Art, 658 Phelan Building, San Francisco. The competition closes the 15th of February, 1940.

Those competing must furnish the names of three persons who have knowledge of the field in which they are working, and who are acquainted with the applicant and his work. In addition, applicants in literature must furnish a specimen chapter or two from the work upon which he is engaged, or present a book showing his performance in the past, together with a plan for next year's work. In painting, applicants are required to present two specimens of their handiwork.

Two committees of experts in each field will be appointed by the Trustees to recommend to them the successful candidates. Awards will be made about the 1st of April, 1940, and the fellowship will be tenable from July 1, 1940, to June 30, 1941.

HOUSING ACTS VALIDATED

All questions as to validity of the California State Housing Acts passed to enable county and city Housing Authorities to construct low-rent housing projects in cooperation with the Federal government under the Wagner-Steagall slum clearance act were swept aside by the State Supreme Court in a decision handed down in San Francisco October 11, declaring the legislation within the constitutional powers of the state.

Decision was made in a test suit filed by the Housing Authority of Los Angeles County to compel its chairman, Isidore B. Dockweiler, to execute a $10,000 demand note under a contract between that agency and the U. S. Housing Authority. Mr. Dockweiler had refused to sign the note to provide grounds for the suit.

All contentions raised against the power of the state to enact such laws were overruled by the court. The principal issue was whether slum clearance and public housing projects for low-income families are public uses and purposes for which public money might be expended and private property acquired.

The court quoted from a Pennsylvania Supreme Court decision that "neither our State nor our Federal Constitution forbids changes merely because they are such. They require only that the new weapon employed to combat ancient evils shall be consistent with the fundamental scheme of government. The elimination of unsafe and dilapidated tenements is a legitimate object for the exercise of the police power."

As announced in Architect & Engineer last month the U. S. Housing Authority, which advances the money for erection of the low-rent dwellings to be repaid by the local housing authority and protects it against loss from operation of its projects by subsidy, has allocated $50,000,000 to the state of California, of which $30,000,000 is apportioned to Los Angeles county and city, $15,000,000 to San Francisco and $5,000,000 to Oakland.

PRODUCERS' COUNCIL JINX

With architects and engineers as their guests the Producers' Council Club of Northern California held its annual Christmas jinx Tuesday evening, December 12 at the Lakeside Country Club on Skyline Blvd.

The party was a stag affair and was preceded with golf in the afternoon. The social hour began at 6:30, followed by dinner and entertainment. The committee prepared a very fine program of professional talent.

HARBOR ENGINEER BUSY

Frank C. White, Chief Engineer of the Board of California State Harbor Commissioners, is working on a $460,000 reconstruction program for the State Belt Railroad, under the Federal W.P.A. He is also conducting preliminary studies for the reconstruction of the Ferry Building, San Francisco, for a possible accommodation of the proposed combination passenger and cargo steamers of the President Lines.

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BUILDING PRICES UP

Prices of building materials have been rising steadily since August and now are only 4 per cent below the May, 1937, peak, the Federal Home Loan Bank reports.

While various authorities insist that such prices are not too high and others refer to even sharper increases in general commodity prices, the Bank Board pointed out that many economists hold the opinion that the price increases in building materials in 1937 were partly responsible for the halting of the recovery in residential construction at that time.

Detailed reports received by the Home Owners' Loan Corporation in its reconditioning activities show that prices of building materials delivered on the job to contractors in September were 2.5 per cent above August prices, and preliminary reports indicate a continuation of the trend in October, the Board pointed out. It also quoted a Bureau of Labor Statistics index showing that wholesale prices of building materials rose from 89.7 on August 26 to 91.8 on October 7 and to 93.1 on November 11.

"The September rise in the prices of building materials was not as sharp as that of finished products and of raw materials in general," the Bank Board reported. "The recent rise in prices of building materials, however, started from a relatively high level, the August figure being 89.6 per cent of the 1926 level. Prices for other materials, on the other hand, had been declining for two years and stood at a very low level; in August, the general price level of raw materials stood at 66.5 per cent and finished products at 79.1 per cent of 1926.

"Whereas the general price level, both of raw materials and finished products, leveled off or declined during October, the prices of building materials continued to rise.

"The prices of building materials are now as high as at the beginning of 1938, according to the Bureau of Labor Statistics index of wholesale commodity prices. On the other hand, the general price index of finished products and of raw materials is still lower than at the beginning of 1938, despite the rapid increase in prices September."

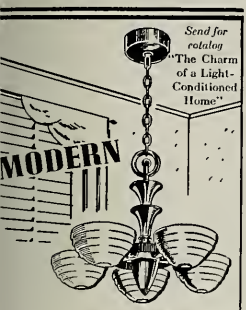
Various Government agencies ha been forced to take notice of the r ing prices in materials, according officials of the Bank Board, with ma contractors asserting that they ca not obtain guaranteed quotations f "even a reasonable length of tin for materials for specific jobs." As result, contractors must in self-prote tion take into account the possibili of price increases and must rai their bids accordingly. At the recer Construction Industry Conference the U. S. Chamber of Commerce, hel in Washington, several leaders of th materials industry warned against e cessive price increases and declare that price uncertainity constituted serious problem.

"It is true," the Bank Board repor declared, "that general business con ditions now are sounder than at th time building fell off in company wit a general decline in 1937. At the same time it is recognized that price uncertainty instills an element of hesi tancy in contractors and builders tha is quickly transmitted to the genera public and which may cause a seriou decline in the output of the entir construction industry."

CITY PLANNER HONORED

"For distinguished contribution to the Plan of the City of New York," George McAneny, honorary chairman of the board of directors of the New York World's Fair, has been awarded the first Medal of Honor of the American Institute of Architects, the New York Chapter of the American Society of Landscape Architects, and the Metropolitan Section of the American Society of Civil Engineers, it is announced.

Mr. McAneny, who has led city planning effort in New York City for more than thirty years, received the medal at a dinner at the Hotel Commodore, New York, December 4. The speakers included Lawson Purdy vice president of the Regional Plan Association; Ralph M. Rice, president of the Brooklyn Chapter of the A.I.A.; Frederick G. Frost, president of the New York Chapter; Charles Downing Lay, president of the Amer-



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n Society of Landscape Architects; rhur S. Tuttle, engineer, and Hobart Upjohn, architect.

Mr. McAneny, chairman of the ard of the Title Guarantee and st Company, initiated the first ac- public interest in city planning New York while president of the y Club from 1906 to 1909. As presi- t of the Borough of Manhattan n 1910 to 1914, he first brought subject before the City govern- nt, and became chairman of a mmittee on the City Plan ap- nted by the Board of Estimate and portionment.

estriction of building heights and e rigid regulation of the con- ction and use of privately owned ctures throughout the City was ertaken. After a commission was ointed to carry out this task, Mr. neny proposed that the City be ed for purposes of building con- ction and uses. There were at the no zoning regulations in any erican city, with the exception of a sification of construction in Bos- ton. Two years later a code of rules, combining the zoning plan and the present system of regulation of heights, sizes and uses of buildings, was adopted by the City government as part of the City's Code of Ordinances, and became law in August, 1916. More than 1,000 cities in the United States have since adopted similar codes.

When the activities of the City Planning Committee were curtailed upon a change of City administration, the Russell Sage Foundation appropriated $500,000 for a period of three years to be administered by a Committee of Seven. Mr. McAneny served on the Committee at that time and again in 1928. The scope of the work was broadened to take into account the entire metropolitan area.

In 1929 the "Regional Plan" was completed, and the Regional Plan Association, with Mr. McAneny as president, took over the program of local public improvements designed to give the plan effect, the Sage Foundation Committee dissolving. Mayor James

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J. Walker had appointed a committee of 500 members on the General Plan and Welfare of the City in 1928, and Mr. McAneny was chairman of a subcommittee on the distribution of population. Enactment by the State Legislature permitted the establishment of a Department of City Planning in the City of New York, which failed, however, to be effectually organized.

A Planning Commission with very sweeping power was provided for by the City Charter taking effect on January 1, 1938. The present Commission, serving under the chairmanship of Rexford G. Tugwell, was appointed.

Due to the efforts of the Regional Plan Association, 170 municipal planning commissions, nine county commissions, and 329 zoning commissions were organized throughout the metropolitan area. A New York State Commission, upon which Mr. McAneny served, was created, later to be succeeded by a similar State body with adequate appropriation, now functioning at Albany.

Mr. McAneny's most recent effort on behalf of the City is the transformation of the old Sub-Treasury building on Wall Street into a City Museum. Restoration of the City Hall along the lines of its original design was directed by him in 1910 and 1911. As chairman of the committee of the Board of Estimate cooperating with the Public Service Commission, Mr. McAneny from 1911 to 1913 participated in formulating the plans under which the City's "Dual Subway" was established. This enterprise not only doubled the previously existing road mileage of the rapid transit system but trebled the track mileage and laid the foundations for a vast expansion of building developed along lines harmonizing with the City Plan.

PIT RIVER BRIDGE

Bids for construction of the double-deck steel superstructure of the Pit River Bridge, comprising 13 spans totaling two-thirds of a mile in length, were received by the United States Bureau of Reclamation in Sacramento January 16.

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The bridge, a feature of the Central Valley Project, will carry two main line tracks of the Southern Pacific railroad and four lanes of U. S. Highway 99 across an arm of the future Shasta Reservoir, 14 miles north of Redding.

The superstructure contract will include furnishing and erecting 17,000 tons of structural and cast steel, placing 1,300,000 pounds of reinforcement bars, laying the railroad floor and tracks on the lower deck and laying the 44-foot concrete highway and two 2½-foot walkways on the upper deck.

The bridge will include a central cantilever structure having a main span 630 feet long and two anchor spans 497 feet long. In addition there will be three truss spans of 282 feet, two truss spans of 141 feet, and five plate girder spans between 140 and 150 feet in length. The girders will support curved highway approaches at either end.

The upper deck of the bridge will be about 500 feet above the present level of the Pit River. However, after Shasta Dam is completed across the Sacramento River eight miles downstream from the bridge, water will back up in the tributary Pit River Canyon to within 35 feet of the lower deck.

S. F. MUSEUM OF ART

Following a tradition established in former years, the San Francisco Museum of Art is now showing its most important additions of the current year to its permanent collections.

Mainly due to the generosity of its patrons, and in particular of Albert M. Bender, the Museum has acquired during 1939 a great many paintings, watercolors and drawings that are outstanding examples of contemporary art. The Museum continued its policy of fostering Western art by enriching its collection of works by artists this side of the Sierras.

Altogether some 170 works have been acquired by the Museum during 1939. Among them are 23 oil paintings and 35 watercolors and gouaches.

The most recent accessions include two of the finest paintings that were shown in the French section at the

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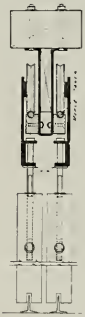

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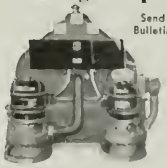

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1940

will find ARCHITECT AND ENGINEER continuing its march towards a greater magazine of Western Architecture for Western needs.

MARK DANIELS will edit one of the early 1940 issues, gathering together such material he thinks architects wish to find in an architectural magazine. Mr. Daniels has designed some notable structures in the past few years, and his experiences with the building industry should make interesting reading. Mr. Daniels' timely "Running Fire" is well known to ARCHITECT AND ENGINEER readers.

REDWOOD

a California industry that has become a world industry—will be pictured and described in its many ramifications of usefulness in an all-redwood issue. Experienced writers will unfold new and practical developments in the use of this material for building construction. The Redwood Number will come early in the spring.

SCHOOLS

a number that will be eagerly sought by architects who specialize in this class of work. Great strides have been made in school architecture in recent years, particularly with regard to lighting facilities. Other new features, such as out-door classrooms, loud speakers, radio equipment, air conditioning, etc., will be discussed by competent writers. The illustrations will show a wide variety of school buildings, beginning with the small district school of one or more rooms and ending with the many-unit high school and junior college groups.

Palace of Fine Arts at the Exposition and which, through the Museum's purchase, have now become permanently owned works in San Francisco.

One is Maurice de Vlaminck's agitated "Landscape in the Beauce," in which the artist, with his peculiar and characteristic color harmonies, has captured the feeling of the windswept and austere plateau country of central France. The other is Georges Rouault's "Head of a Clown." In its concentration of color within the structural black lines, which give a jewel-like brilliance and very strong design to the composition, this painting forcefully reflects Rouault's unique style.

Other recent additions now on display at the Museum include a large watercolor by Tom E. Lewis, "Tugboat at Dock," and two works by another very able local watercolorist, Dong Kingman. Also on view among the 1939 acquisitions are Geneve Rixford Sargeant's atmospheric "Old Red Barn" and oils by Otis Oldfield, Ray Boynton and Maynard Dixon.

SMOOTHER CONCRETE

From the Eastman laboratories comes the news that the same transparent nitrocellulose which is used in photographic films is a major ingredient of a new lacquer that makes it possible to cast concrete with a smoothness hitherto unattainable, the New York Times reports.

The lacquer is applied with an ordinary calcimine brush to a plywood form. One gallon covers 500 square feet. Some of the lacquer is absorbed; most of it dries. The result is a hard, water-resistant surface which does not raise the grain of the wood, so that when the form is removed, only the faintest impression appears on the concrete.

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THE WIZARD OF TALIESIN

A recent example of industrial work has, no doubt, come to your attention, namely, the new Johnson Wax Company building at Racine, Wisconsin, by no less a genius than Frank Lloyd Wright. Clever as many of the innovations introduced may be, and however novel and brilliant, I question the wisdom of the continued acclaim of such radical efforts. Its author has my warmest admiration for what he has accomplished. There is no disavowing the fact that he is one of the outstanding figures in the architectural world, that his influence has been felt in it as perhaps that of no one else, and yet much of his work impresses me as clever feats, unrelated to actual needs and economically wasteful. To me, architecture implies the very opposite —first, observation and solution of practical requirements; second, care in producing the desired results with respect for economy. To me a straightforward, simple and direct solution of any problem is infinitely more desirable than even the most brilliant stunt. At that, we need men to do the unusual to set the pace, even though their influence for good be not always unalloyed. We need only think back of the leaders in the field, such as Richardson and Sullivan, to realize what harm their work did to architecture in general. Their idiosyncrasies rather than the good in their work, were copied by followers of lesser skill. At that, there is no denying the fact that but for innovators, architecture would remain static.—Albert Kahn.

RUNNING FIRE

(Concluded from Page 1)

few), a pencil stub, paper money holder (empty), a couple of unidentified keys, handkerchief, a piece of broken jade, two nails.

Hip Pockets—Key ring, pennies and Scotch tape in the right. The left bulges with the heart of the system—my wallet. The contents are vital and justify a subdivision. In it are membership cards, driver's license, identification card (still blank), expired Treasure Island passes, a credit card to the Plaza Athena in Paris, a postal money order receipt dated July 21, 1936, a number of personal cards in Spanish and Viennese.

The upper vest pockets are the

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treasure houses. Here are the address and telephone number book, cards of Senators, Representatives and Florence McAuliffe, notes from myself to myself, pencils, pens, six inch scale, vital notes such as "U. S. H. A. won't accept any more," "trouble brewing in Europe," "get behind Rossi's next campaign," and "Bill McCarthy will make a good P. M."

But I fear this inventory is going to be too long—yes, by pages. Anyhow, there is enough to show how an orderly man can systematize his pockets. There remains only the question of final filing of the contents after the renovation. Personally, I like dumping them into the bureau drawer.

* * *

City Planning

I have seen no city plan developed and followed for San Francisco. Daniel Burnham prepared one which, to the best of my knowledge, has been adhered to as little as possible. I know of no other city that has developed so much antagonism for planning as this one.

Naturally certain great arterials develop due to ease of access, directness between two business centers and width of streets. From various streets, avenues and boulevards of San Francisco there have developed a few arterials and one of the worst traffic problems in the State. Out of this traffic problem have developed numerous surveys of transportation facilities—the McClintock Survey, the Arnold Survey and many others, none of which have been adopted.

But traffic isn't the only problem, business centers, residential districts, a civic center, parks, focal points of interest and recreational areas must all be coordinated to a general plan and pattern that will attract and interest visitors and, at the same time, make the city more enjoyable for its residents. I don't know whether the City Planning Commission is supposed to do this or not—but as a final plea for the sanity of San Francisco's beauty, let's have a plan and let's have a group that can adapt or change the plan as little as will be necessary to meet changing conditions.

Perhaps the trouble lies in the fact that there is so much street noise our officials cannot hear one another when they attempt to discuss civic problems.

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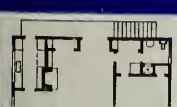

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RUNNING FIRE

by MARK DANIELS, A.I.A.

The Radio and the Architect

The radio must be selling the goods, or the mass of manufacturers would not continue to hire those announcers to murder the English language. That being the case, why not get together and run a sales campaign for architects? Patterned after the form of the larger concerns some such announcement as the following might bring in floods of jobs:

"At the very first sign of a cold or chill, send for an architect. With no trouble to you he will locate the death dealing drafts, the lethal leaks, the faulty foundations and with lightning speed yet velvet, gentle firmness will restore that soft tropic air which is health to slippered feet and the life to toddling tots. So we say to you, if you want that pure nose-cleanness, that healthy cough-freeness, that baby-crylessness that is the heritage of youth, always keep an architect in your house. 99.9 doctors out of a hundred prescribe an architect for colds, sneezes, wheezes, back-ache, arthritis and all those ailments that result from bad basements, leaky roofs, plugged plumbing and draughty doors.

"Don't put it off. Get an architect to-night!"

★ ★ ★

East and West

A lot of ink has been exquilled in the discussion of the comparative merits of eastern and western architecture. It is only natural that the inhabitants of any region should lean to the styles of their districts, but recent surveys show a definite trend.

In conversations with several eastern architects, too prominent to be named, I have been told that within the past two years the eyes of the east have been turned more and more to the work of the western architects. Evidence of this is seen in the rapidly increasing number of illustrations of western architecture, both domestic and monumental, being shown in practically all the eastern journals.

Perhaps this is due to our remoteness from Boston. Perhaps our traditions skip a remoter history, right over the garoting cords of Victorianism. Anyhow, we in the west are going places.

★ ★ ★

Then and Now

Thirty-five years ago I received a salary of $65.00 per month as a draughtsman and designer. The others were getting $60.00 but I had a couple of degrees which gave me the tremendous, higher rate. The architects of that day received the standard rate of six per cent. Engineers at that time worked mostly on a monthly basis that seldom ran over one per cent.

Today draughtsmen receive from architects $65.00 to $75.00 per week and chief designers as high as $125.00 per week. Engineers receive two per cent or more. The architect still receives the standard rate of six per cent on Federal work and on those all too frequent occasions when they take anything they can get.

Something is wrong. It is not that we were making fabulous sums in the old days, for we were not. To the best of my knowledge architects were only making a comfortable living in 1905. The difference is that they are not making a decent living now unless they have several strings to their bows which is bad for good architecture. Further, the C.I.O. will not have us.

★ ★ ★

Answer

The Architect and Engineer received a letter from Mr. A. L. Brinckman, Building Inspector of the City of Berkeley, from which I quote and append an answer:

"For my sake, and that of perhaps several others, would you mind giving us the address of Mr. Daniels' favorite bar? Because I want to ask the Little Man the following question: "Is there more of is than there is of isn't?" In other words, down through the ages, have there been more apples, trees, people and "is" objects than there will be in the future?

"And when T. L. M. has really got me foggy, will someone remember to ask him this "Are there more 'possibles' than there are 'impossibles'"? (Maybe T. L. M. won't haunt Mr. Daniels after that)."

The Little Man appears, Mr. Brinckman, to be an habitue of Kearny Street, wandering loosely from bar to bar and disappearing. He invariably wears a long coat, gloves and a cane—I have discovered that his first, or last, name is Barney and that probably one or two evenings a week he will drop into the Derby or Fred Solari's, though at the latter he is much more loquacious.

His habits are about as I have described—he does not introduce himself—brooks little if any interruption—and generally talks politics, bringing from under his long coat a petition to sign to have someone appointed, someone thrown out of office, or almost anything. If you don't reach for your pen quickly he makes a number of apologies, refuses to let you know what the petition is about and wanders off rather hurt about it all. He evidently has a good education, for one day he orated on phrenology and told me that the bumps on my head signified I would come to no good end. He then borrowed the drink of a man named Sullivan, whom he appears to like very much because he has rubbery legs.

I doubt whether I can ask him about the "possibles" and "impossibles," the "isses" and the "isn'ts" but I shall try. He will undoubtedly inform me that men drink too much, that he doesn't drink enough and that the woman at the end of the bar has nice legs. He will then discuss the soul of women, steal my drink and vanish while I meditate. Yet I'll try.

★ ★ ★

Celebration in Reverse

My daily Old Fashioned revived the spirits after the holiday season, so I looked around at the customers. The Little Man was sipping an alka-seltzer with discontent and watching his mirrored reflection with watery eyes. I said "Happy New Year."

The Little Man hung his cane on the bar rail and glared at me. "The institution of New Year's eve is a vicious, barbaric custom."

I didn't say anything for a couple of minutes and the Little Man continued: "New Year's celebrations are more ancient than the Bible, and their intent and purpose are a confusion of history. The Roman

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ARCHITECT AND ENGINEER

JANUARY, 1940

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ISLAND HOUSE OF HILARY BELLOC, RICHARDSON BAY, CALIFORNIA, Mario Corbett, Architect (portrait)

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Mario Corbett, Architect

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- Improved Burners, multitubular, raised port, multislot, fixed orifice and air mixer, scientifically designed to develop moximum heat units from fuel. Automatic pilot for safe operation.
- Quiet Blower, forces air in any desired direction and for long distances (furnace may be located on any level), multiblade pressure type, rubber vibration dampeners, flexible asbestos connection for unusual quietness. Easily removable air filters.

Write for complete information or consult your local heating contractor.

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MAKERS OF BILTWEL AND TORIDAIRE GAS FURNACES

Located on Potrero Avenue in San Francisco, the plant of Fraser & Johnston Co. was designed to streamline the manufacturing of Biltwel and Toridaire Gas Furnaces, affording ideal working conditions for employees.

Photos by Hoffman, "California Homes"

NEW DAYLIGHT FURNACE FACTORY

The new daylight factory of Fraser & Johnston Company, pictured here, includes approximately 40,000 square feet of floor area, devoted to the manufacture of Biltwel and Toridaire gas furnaces. Manufacturing and assembling moves through all its various stages with a minimum of lost motion, due to the carefully planned production line and strategic location of all the necessary machinery, supplies, equipment and materials. Nearly 100 employees, including skilled workmen and technicians, are engaged in the production of the various types and sizes of gas furnaces.

Machinery and equipment housed in this modern plant is of the latest design and contributes to the efficient manufacture and assembly of each unit. The massive 200-ton press shown below, accurately stamps out the first assembly units. Heavy sheets of heat-resisting steel are fed into the huge press, to emerge shaped and cut as shown in the second picture. After trimming and welding together with an electric torch developing heat of five and six thousand degrees, the sections together form a single heating element as shown in the last picture.

Other equipment is equally efficient in the producing of gas furnaces which are as the name Biltwel implies, precision built for a maximum of heating comfort in homes everywhere. Some 30,000 Fraser & Johnston Company units are already in operation.

UNION PIRACY AT THE NEW YORK FAIR

(Bulletin, Illinois Society of Architects)

In recent months architects' organizations in many parts of the country have been agitated by the high cost of building. They have sought the reasons and have come to the conclusion that it is not the established per hour wage of labor nor the generally quoted cost of material that causes this astonishment. It is the high-handed action of labor unions through coercion, and collusion of building material dealers.

At the recent convention of the American Institute of Architects, resolutions were offered seeking investigation and relief and a new committee was named to investigate and study remedies. The subject was made a theme for the next convention. John M. Carmody, Administrator of the new Federal Works Agency, referred to the building industry's troubles as "inefficiencies and incongruities."

The Chicago Chapter, A. I. A., had a committee on this subject and came to Washington with strong resolutions, which inadvertently never reached the floor of the convention. The Illinois Society of Architects at its Rockford meeting on October 14, passed resolutions on this subject.

The "American Mercury" for November presents "Labor in a World of Tomorrow" by Stanley High, which shows in detail how exhibitors at the New York Fair were literally held-up by the labor unions in Queens, where the Fair is located, so that some withdrew from the Fair because of this and many others were outraged. As a result, the Fair, instead of promoting good will toward the United States among the sixty nations represented, has created widespread bitterness. And since labor, in general, has suffered by the selfishness of this group of labor leaders, the labor movement stands to gain by their exposure. The American Federation of Labor, with whom these unions are affiliated, sought relief for the exhibitors but found themselves impotent, the union locals claiming—according to Burt Kirkman, President of Local 3, International Brotherhood of Electrical Workers—that the members of the union had been through hell during the depression and that they expected to take out of the Fair all that the traffic would stand.

Author High says that the Netherlands building wrote off $30,000 for excessive labor charges, that the French Commissioner claimed that France's Pavilion cost in overcharges from $100,000 to $200,000. Fifty thousand dollars deficit at the Venezuela building is laid entirely to exorbitant labor charges. The Belgians had seven strikes. It cost $10,000 to settle one. A Roumanian official stated the lowest wages being paid to a workman was $200 a week. From that it was run up to $400. Nothing but union labor could be employed at the Fair.

Machines that had been wired in factories by union labor had to have their wiring removed on coming to the Fair grounds and rewired. All this, notwithstanding that two years ago the United States Secretary of Labor issued a permit allowing—as provided by law—foreign participants in the Fair to bring in workers to install and handle special exhibits.

Nevada planned to display a five-ton electrically operated model of Boulder Dam. It had been wired by union labor before shipment. The union at the Fair demanded its dissemblage and rather than comply, Nevada withdrew from the Fair. Belgium's carillon could not be installed by the experts that had crossed the ocean to do it, until American union "stand-bys" had been employed to look on. The Venezuelan Consul in New York City was picketed because six Venezuelan musicians were employed at the Fair to play native music.

Plumbers complained that they had no overtime. The architect for one group of buildings was served with an ultimatum that, unless overtime was provided during the following two weeks, they would walk off the job. Overtime was arranged—at $4.00 per hour. On a Sunday, the architect turned up unexpectedly. The five plumbers, supposedly working, were found peacefully smoking nearby—at a cost, per day, of $24.00.

The Venezuelan Building was forced to employ maintenance men at $33.00 per day to turn lights off and on and to replace burned-out bulbs. Arkansas had to maintain a motion picture operator at $150.00 per week to watch an automatic movie machine.

Union carpenters furnished a refreshing contrast to these hold-ups. There is no record of labor troubles with carpenters involved.

Many more instances might be cited from Mr. High's article, but enough is enough. What did Thomas Jefferson write in the Declaration of Independence? American citizens are entitled to "Life, Liberty and the Pursuit of Happiness." The Queens Borough unions evidently pursued Happiness.

THE PICTURE BELOW, PRESENTED BY COURTESY OF SOUTHWEST BUILDER AND CONTRACTOR, SHOWS THE NEW ARMORY BEING COMPLETED IN LOS ANGELES FOR THE UNITED STATES NAVAL AND MARINE CORPS. THE COUNTY OF LOS ANGELES SPONSORED THE PROJECT, ALL CONSTRUCTION WORK BEING CARRIED ON BY WPA LABOR. THE BUILDING AND EQUIPMENT WILL REPRESENT AN EXPENDITURE IN EXCESS OF $1,000,000.

ARCHITECTURAL, STRUCTURAL AND MECHANICAL PLANS WERE PREPARED IN THE OFFICE OF STILES O. CLEMENTS, LOS ANGELES.

Residence of Henry Park, Jr., Burlingame Hills, Calif. *Charles Pederson, Builder*

CALAVERAS CEMENT

The architect, Mario Corbett, specified CALAVERAS STANDARD GRAY PORTLAND cement for the general construction and CALAVERAS WHITE PORTLAND cement for the exterior finish of this modern home.

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MARIO CORBETT, Architect, not only approved the use of BASALITE CAMBERED SHINGLE TILE for the Rothery house, pictured above, but he has specified BASALITE LIGHT WEIGHT MASONRY UNITS and BASALITE CAMBERED SHINGLE TILE for three other residences soon to be started at Millbrae and Carmel, California.

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Arthur Brown, Jr., Architect

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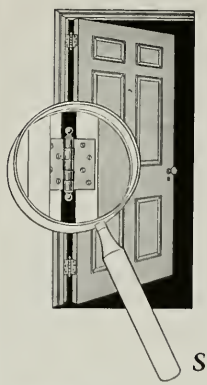

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HOW ARCHITECTS ARE MEETING THE WAR SITUATION

A RECENT issue of The Architects' Journal, a well-known British publication, gives some idea of the calm and efficient manner in which the situation created by the war is being met by the architectural profession and building industry in England.

We find that the Architectural Association has taken a lease for the duration of the war on a fine Georgian mansion, known as the Mount House, which stands in grounds of 2½ acres on the edge of Hadley Common and Woods, Herts.

Numerous architects are publishing their new addresses in the country, as well as many building supply firms, thus:

The Val de Travers Asphalte Paving Co. is located at Sevenoaks; the British Insulated Cable Co., Ltd., at Cobham, Surrey; the Cement & Concrete Association, at Lincoln Building, Oxford; the Synchronome Co., Ltd., at Alperton, Middlesex, etc., etc.

The Architects' Journal has instigated what they describe as an Emergency Information Center, where architects and builders can send their questions, mainly in connection with A.R.P. works, and the whole wealth of architectural information will be at their disposal.

Some of the questions give an idea of the service that is being rendered—

Question: At the Generating Station of this undertaking there is a brick chimney 330 feet high, 17 feet 6 inches in diameter at the top, and I am desirous of forming some idea of the area which would be covered with gross debris in the event of this chimney collapsing due to the effect of a large H.E. bomb in the vicinity.

Answer: With a diameter of 17 feet 6 inches at the top, the chimney almost certainly has at least 3 feet thick brickwork at the base, and being a circular structure is highly resistant to blast. A bomb dropping 20 or 25 feet from it should have little effect, and at even closer range might damage the brickwork without bringing the chimney down.

If a bomb strikes the top of the chimney there will be relatively little damage. Greatest danger is if the bomb falling obliquely strikes the shaft near its base, demolishing the brickwork on one side so that the stack falls when the debris will spread as far as 210 feet from the stack.

Zone of greatest danger is then in the neighborhood of 100 feet from stack.

Question: Can you suggest a simple and economical blast-proof emergency exit for escape from a basement shelter through a 14-inch brick wall into an adjoining basement?

Answer: The simplest exit is probably that recommended in the Home Office publication, "Directions for the Erection of Domestic Surface Shelters" (H.M.S.O. price 2d.). An opening is left in the brickwork and this is protected by means of a ¼-inch thick mild steel plate on each side. The plates must be easily removable, and are consequently fixed in position by means of four ⅜-inch coach bolts, each with a washer and wing nut on the inside wall. The plates are punched with square holes to receive the coach bolts and to prevent them turning. The space between the plates is filled with dry brickwork.

Question: We are faced with the problem of providing light-tight screens to windows in a room which becomes unbearably stuffy with the present blackout curtain arrangement, that provides no ventilation, and shall be obliged if you will let us know whether you have published an information sheet showing ventilated blackout curtains.

A: We have no information sheet on this subject, but the methods shown in the diagrams below have proved effective in practice. It is important that the inner surfaces of the screens be painted matt black. The arrangement can be modified to suit various types of window.

Question: When no sand is available can sandbags be filled with earth?

A: There is no reason why the bags should not be filled with earth, which is less liable to trickle through small apertures in the bags than dry sand, but the earth will retain water and the life of the sandbag will be reduced considerably.

Question: We are architects to owners of several blocks of flats in and around London. More than 50 per cent of the tenants in each block have asked for a shelter to be provided, and we understand that if our client provides shelters he is entitled to a grant, but to whom do we make application for this and to whom do we submit the schemes for approval?

Answer: Unless the tenants are within the income range that would make Anderson shelters available if there were space for them it is unlikely your client will receive a grant, but he is entitled under the Civil Defense Act, 1939, to raise the rent for a period not exceeding eight years, to cover the cost of the shelter.

If, because more than 50 per cent of the tenants have asked for it, he must provide a shelter, he is entitled to apply to the local authority for a loan.

The procedure varies in different boroughs. In some there is, under certain conditions, a small grant, but it is best to get in touch with the Town Clerk in the district concerned and ask his advice. Application for grant or loan should be made to the A.R.P. engineer to the borough, who will send you a form. This must be completed and returned to him with plans of the scheme in duplicate, a block plan and a specification. You should get a reply within 24 hours. Whether you apply for the grant or not, the scheme must be submitted to the engineer for approval.

ARCHITECTS AND NATIONAL AFFILIATION

Professional, business, and labor societies or associations which accomplish the most for their members have a national organization which can represent the majority of its members and gain public recognition, as well as carry desirable social, business, and political influence. Architecture is one of the professions that suffers from lack of complete unity of effort on a national scope in the interest of its members.

Many architects in smaller towns and cities appear unconscious of the benefits of membership in a national body. Often they are not even members of a local or state architectural organization. Yet real troubles beset them, to which corrective measures might be applied if they would unite with their fellow architects in solving their problems. The individual alone can accomplish little in those matters, but there is winning strength in united effort. This applies not only to the architects of the smaller cities but to those of the large ones as well, although more architects in the large cities, and in their immediate neighborhood, have come to realize the advantages of cooperative effort. They represent at present the larger portion of the membership in architectural associations.

State organizations can do much to remedy local troublesome problems, such as the adoption, modification, or repeal of local zoning laws, building ordinances, restrictions in the use of materials, unreasonable labor restrictions, and many other items of general public interest, and in addition can materially assist in lessening unfair and unethical practices and competition, establish better standards among architects themselves, and discourage the usurpation of the architects' prerogatives by others.

There are, however, many problems that go beyond the confines of the state and become questions of national extent and interest, which affect architects and their work generally. For the study and solution of such questions, a single national organization, truly representative of the profession in the country as a whole, is the solution which other professions have found to be most practical.

The state architectural associations in their convention in Washington agreed that the American Institute of Architects is the logical nucleus around which to build a still larger and more influential, unified, national architects' organization. The Institute's existence spans many years as a relatively small national architects' organization. It has accomplished many things—too numerous to enumerate here—which have been of benefit to the architects of the country whether members of the A. I. A. or not. The schedule of fees recommended by the Institute, for instance, has been recognized as standard by the courts, and with minor modifications

(Turn to Page 74)

ONE PIECE

A SHOWER BASE CREATED IN TERRA COTTA

WE are glad to announce that the new "Clarkson" Terra Cotta Shower Base Unit is now in production. In keeping with a long-established policy, this new development was not placed on the market until thoroughly proved under manufacturing conditions and in actual use on the job. The long process of experimentation and practical testing has at last been completed. The new product is, without doubt, an unqualified success.

Installations in a large institutional building and in residences in California, Oregon and Nevada have been made to the satisfaction of all parties — owners, architects, contractors.

The "Clarkson" Shower Base Unit provides four major advantages: *1—Economy;* substantial saving in labor cost, as it eliminates the need for lead pans and other types of costly sub-structures. *2—Leakproof;* the unit is a single casting of well-burned terra cotta, preventing leaks that come through faulty joints or cracks due to slight settlement. *3—Sanitary;* smooth, hard one-piece surface drains off completely; rounded corners prevent dirt deposits. *4—Non-slip;* produced by scientific placement of silica granules under the surface glaze.

"Clarkson" units are adaptable to all types of enclosures. They are available in practically all dimensions that are generally required. Colors are in four beautiful pastel tones, to harmonize with the more widely accepted finishes in bathroom fixtures. Special colors are obtainable at reasonable extra cost.

Progressive architects, being alert to new and improved products, will surely welcome this latest development. It not only provides the four major advantages referred to above, but adds a smart touch of newness, something which has been all too rare in the field of building materials.

Data folder containing details, specifications and reference to a number of installations, will be off the press in a few days. May we send you *your* copy?

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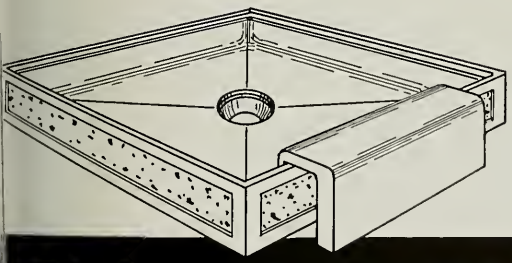

"CLARKSON" ONE-PIECE SHOWER BASE

To complement the one-piece terra cotta base, a one-piece curb (see cut at left) is also made of terra cotta. Available at a slight additional cost.

CLARKSON

TERRA COTTA SHOWER BASE UNITS

HAWS FOUNTAINS AGAIN

OAKDALE UNION SCHOOL, OAKDALE, CALIFORNIA
Frank V. Mayo and Eric Johnson, *Associate Architects* — Arthur Ray, *Plumbing Contractor*

THE picture shows one of the outstanding school buildings erected in Northern California the past year. Modern in design and equipment, it has been pronounced by educators among the best planned schools for teaching efficiency in the State.

The architects specified **Haws Sanitary Drinking Fountains** to safeguard the health of the pupils. This equipment includes four corridor recess porcelain fixtures (Model 80), one kindergarten (Model 7A) and seven yard Fountains of 3 and 4 bubblers each (Model 10K).

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. . . proves Copper Steel's superior resistance to corrosion

N 1916, at Annapolis, Maryland, . uoder the supervision of the Ameri- in Society for Testing Materials, ommittee on Corrosion of Iron and teel, a number of leading metals were it "on the rack". Among them, four hich are commonly used today to bricate duct work and housings: pper steel, open-hearth copper iron, on-copper steel and open-hearth non- pper iron. The chart on this page ows what happened! 21 years of con- nuous exposure proves copper steel finitely superior.

Ducts and housings in modern heat- g and air-conditioning systems face rrosive conditions very similar to ose under which these metals were sted. They must meet the constant attacks of air and water—alternately and combined. Adequate defense against rust is a prime requisite if you want metal work to last.

U·S·S Galvanized Copper Steel provides ducts and housings with double protection against corrosion . . . a durable coat of galvanizing, plus a base metal that resists rust should the galvanizing become damaged in use. And it's easier to work, uniform in ductility, gage, size . . . makes possible true bends, tight seams, neat joints. Specify U·S·S Galvanized Copper Steel Sheets on your next job . . . if you want ducts and housings to last the life of the building in which they are installed. We will be glad to give you any further information.

PROVING GROUND. Here's where many different types of sheet metal were tested —subjected to various kinds of corrosion. 21 years' exposure proved Copper Steel the ideal material for modern heating and air-conditioning uses.

This chart compiled from inspection reports of the Committee on Corrosion of Iron and Steel, A.S.T.M. Proceedings 1937, shows results of tests carried on at Annapolis, Md. from 1916 to 1936. After 21 years' exposure, 91% of COPPER STEEL sheets remained "sound" (unperforated). Other materials were decidedly inferior.

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Scully Steel Products Company, Chicago, *Warehouse Distributors*
United States Steel Export Company, New York

UNITED STATES STEEL

Photo by Sonya Noskowiak

CASTRO VALLEY KINDERGARTEN AND COMMUNITY CENTER
NEAR HAYWARD, CALIFORNIA

MARIO CORBETT, ARCHITECT

CASTRO VALLEY SCHOOL IN A SETTING OF FRUIT AND FOLIAGE TREES

SIMPLE MODE OF LIVING EXPRESSED IN MARIO CORBETT'S WORK

By HARRY SANDERS, Jr., B. Arch.

A DECADE ago, as vital changes in the economic and social structure of our country—if not the world—were being realized, there came also great need for a more simple and more practical mode of living. This was the beginning of an era in which the architect would have many more demands for the well-planned small house than he would for its predecessor, the elaborate town house whose good qualities had been outmoded by its high cost of upkeep and lack of outdoor living area. The United States—and particularly California, we believe—again had become home conscious, and yet the cost of living was toned down to a more reasonable plane while the standard of living steadily grew higher. With this new trend, naturally, came new subdivisions and land developments.

But since the prospective owners of these homes no longer were satisfied with the typical "bungalow" design of the 1920's, architects focussed their attention on solving the small home problem. One of the young architects whose study of the situation was influential in changing the Small House into a Home, and who since has taken an active part in the architectural accomplishments of the San Francisco Bay area, was Mario Corbett; he opened offices in San Mateo in 1930.

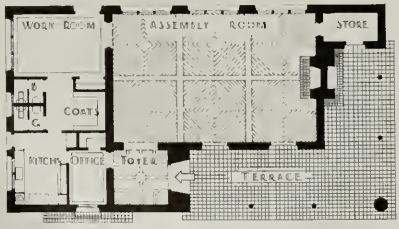
Architecture was a tradition in the Corbett family, but seldom does one find a more balanced combination of the sense of the aesthetic and the ability to plan for real living than is demonstrated in his work. His earliest training was received in art schools, and after graduation he found it difficult to reduce art from his chief vocation to an avocation in order to follow in the architectural footsteps of his father, B. Cooper Corbett, of Los Angeles. Perhaps he was torn between art and architecture until 1926, when he won honors in a national small house competition; and yet even now Mr. Corbett spends Sundays and holidays sketching and water-coloring, and his work has been shown at several San Francisco galleries, including the Legion of Honor.

During these years of training in both architecture and art, Mario Corbett developed a philosophy for residential architecture which characterizes many of the homes of his design; his work is to be found in practically all of San Francisco's suburban communities. His careful

ADOBE BRICK AND REINFORCED CONCRETE SCHOOL

SHELTERED PATIO PROVIDES A PLAYGROUND FOR THE YOUNGSTERS

Some unusual structural features are embodied in the Castro Valley Kindergarten and Community Center in Alameda County. While stabilized adobe bricks are used for exterior and filler walls, a reinforced concrete frame takes all loads, both vertical and lateral, the brick carrying no more or less than their own weight.



PLAN

planning facilitates an ease of living.

Although his designs have included many styles from the Cotswold to the Mount Vernon, certainly none of his work is stale or stodgy. For he never has allowed fussy frills to take the place of simple lines, good proportions, interestng textures.

The evolution of the modern trend, however, absorbs most of Mr. Corbett's interest and study.

"But," he insists, "don't try to shove modern down the throat of the client if he is not absolutely sympathetic to the cause."

A typical example of this architect's open-planning and simplicity of design is the Castro Valley Kindergarten and Community Center Building, which recently was completed in Alameda County. Here he has created a feeling of informality and warmth in a small building which is to serve a dual role: that of a school during the day and as a gathering place for meetings and entertainments in the evenings.

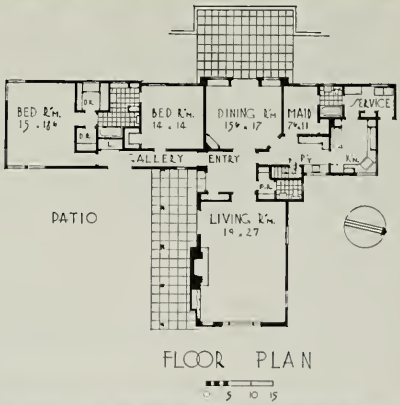
Stabilized adobe bricks are used as filler walls 19 inches thick between columns and beams of reinforced concrete in the construc-

matchless setting for one of Mr. Corbett's intreating nch houses . . . low and rambling, with ample porch om and French doors to open when more sunshine desired.

on of the building, for which Mac D. Perkins as structural engineer. The concrete frame kes all loads, both vertical and lateral, and e adobe, which carries only its own weight, anchored to the frame by steel rods laid in ernate joints of the brick work. "T" bars structural steel were placed vertically at des of openings where no columns occurred. nce W.P.A. labor was used, the cost of the tire building came only to $2.25 per square ot.

The residence of Mrs. James McL. Mitchell esents a feeling of country ruggedness as it gs the ground in the middle of a 200-acre nch near Morgan Hill. In this rambling farm- use, Mr. Corbett took advantage of the tas in every direction, and his use of heavy sts and chimneys hold this building close to e ground and prevents it from becoming nesome" in its spacious surroundings.

One of the first requisities in the design of ome, Mr. Corbett believes, is the coordina- n of the interior of the building with the out-



PORCH DETAIL

HOUSE FOR J. W. HOLMES, PIEDMONT

FRONT VIEW FROM ROAD

Photo by Foreman

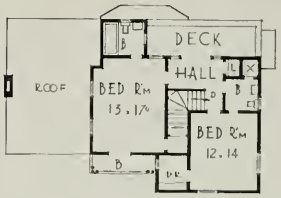
TWO EXTERIOR DETAILS OF THE EDGAR D. O'BRIEN RESIDENCE

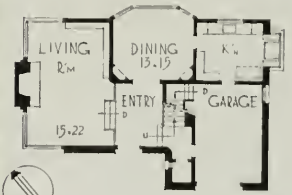
INTERIOR OF HOLMES HOUSE, MARIO CORBETT, ARCHITECT

LIVING ROOM

Photo by Foreman

EXTERIOR DETAIL

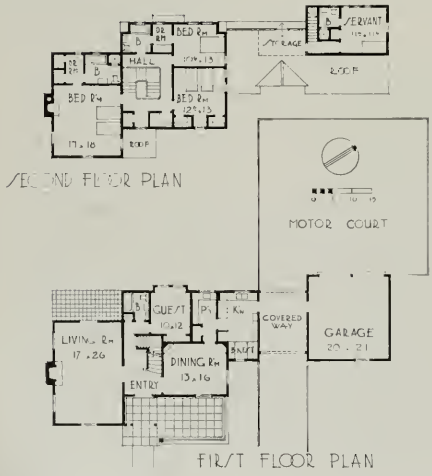




HOUSE OF JOHN W. McKEY, HILLSBOROUGH

FRONT VIEW FROM ROAD

Photo by Howard F. Hoffman



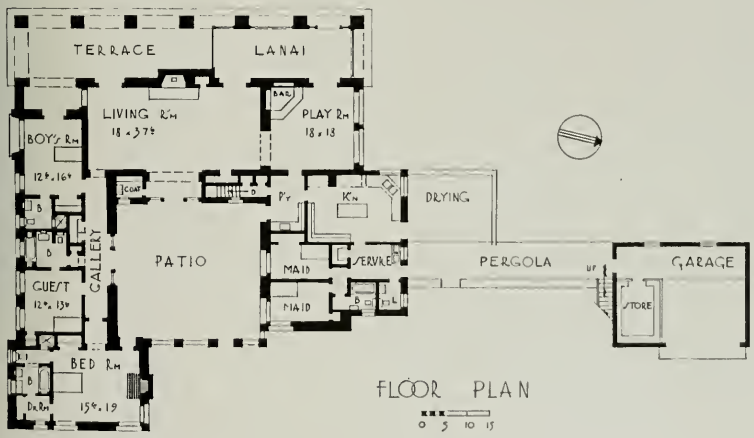
PLANS

of-doors. For instance, in the Piedmont home of Mr. and Mrs. J. W. Holmes, one-half of the living room looks out upon azaleas and other flowering shrubs, and in several instances (the Henry Park, Jr., residence, for one) the architect has linked the inside with the outside by the use of planting pockets on either side of the chimney and at the level of the window sills. Notice also the enormous oak which grows through the roof of the porch and serves as a feature of the Michel Marculescu home in Hillsborough.

As the accompanying photographs and plans illustrate, the architectural designs of Mario Corbett definitely combine good taste with definite thinking.

HOUSE FOR MRS. J. McL. MITCHELL, MORGAN HILL

RONT VIEW FROM DRIVE



PLAN

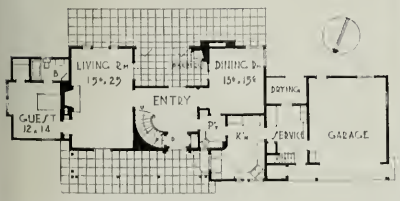
HOUSE OF R. C. POWERS, HILLSBOROUGH

FRONT ENTRY DETAIL

Photo by Howard F. Hoffman

PARTIAL FRONT ELEVATION, HOUSE FOR MR. AND MRS. ROY C. POWERS, HILLSBOROUGH, CALIFORNIA

SECOND FLOOR PLAN



FIRST FLOOR PLAN

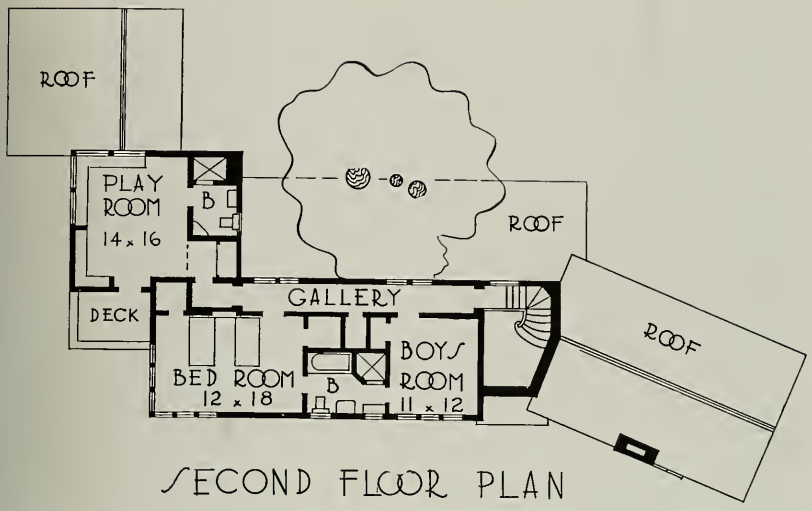
PLANS

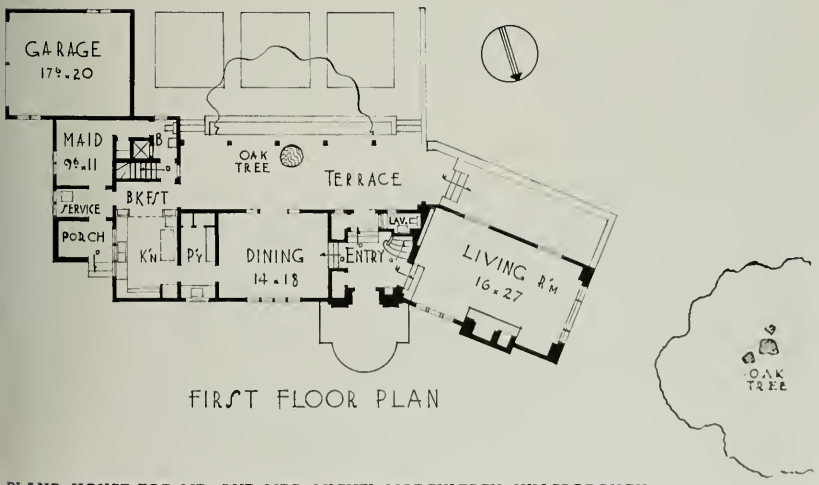
DETAIL OF CIRCULAR STAIRCASE FROM ENTRANCE HALL

HOUSE FOR MICHEL MARCULESCU, HILLSBOROUGH

FRONT VIEW FROM ROAD

VIEW FROM PATIO TO OAK PIERCED TERRACE

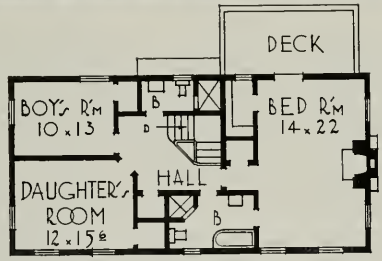




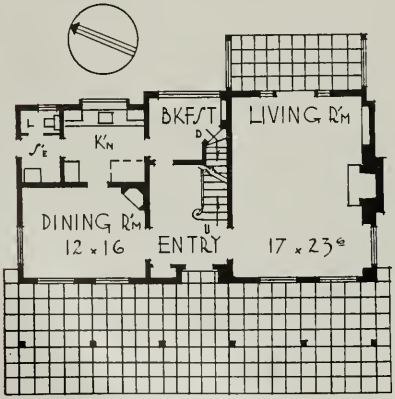
PLANS, HOUSE FOR MR. AND MRS. MICHEL MARCULESCU, HILLSBOROUGH

HOUSE OF ARTHUR SCHADE, SAN MATEO

Photo by Berton Crandall



SECOND FLOOR PLAN



Not a common, but none the less interesting treatment, of a suburban home.

The two-story porch with supporting columns and the graceful roof lines, suggest the old Mt. Vernon style of architecture popular in the early Colonial days.

The floor plans show a compact, convenient arrangement with spacious living room extending from the front porch to the rear porch.

Second floor is nicely arranged for the family needs with sleeping porch off the master bedroom and separate bedrooms for the children.

HOUSE OF CLIFFORD F. ROTHERY, HILLSBOROUGH

GARDEN VIEW FROM THE STREET

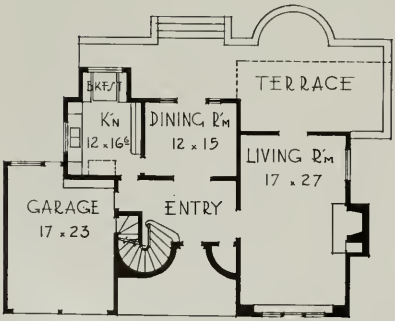
Photo by Berton Crandall

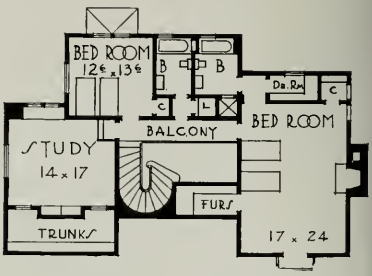
RESIDENCE OF DR. AND MRS. HOWARD A. DOAK, HILLSBOROUGH, CALIFORNIA
Mario Corbett, Architect

HOUSE FOR C. J. HIRSCHEY, SAN MATEO

FRONT VIEW FROM THE STREET

Photo by Howard F. Hoffman

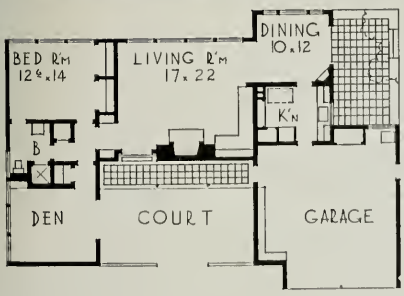




PLANS

HOUSE FOR WM. HALEY, BURLINGAME

Portion of front, detail of patio entrance and plan, house for Lester B. Johnson, Hillsborough

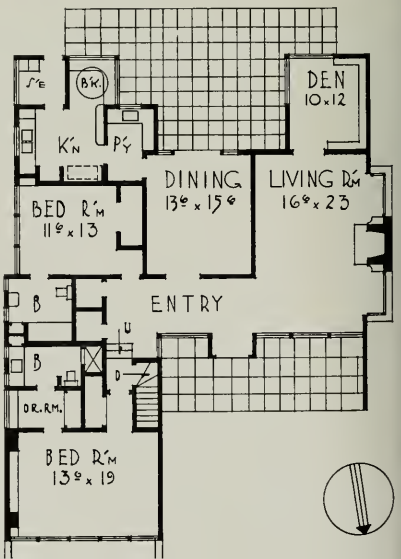


HOUSE OF HENRY PARK, JR., BURLINGAME

One of Mario Corbett's latest houses designed along contemporary lines. The house sits on a knoll in the rolling hills overlooking San Francisco Bay.

It is planned primarily for the needs of the owners, young people who are enthusiastic lovers of the out-of-doors.

A unique feature is the use of planting pockets on either side of the brick chimney at the level of the window sills.



"Mural Conceptualism" is a San Francisco Bay Region art movement that seeks to demonstrate the close interrelationship of modern architecture and abstract design. The movement is young, having made its first public demonstration in an exhibition at the San Francisco Museum of Art the past month. The show brought forth mingled praise and criticism which means there is something in the movement destined to be developed. At least the show has stirred the imagination of the layman and that alone has made it worthwhile. Here are Michael Goodman's impressions (he was among the exhibitors) which are published sans editorial comment:

ARCHITECT REVIEWS MURAL CONCEPTUALISM SHOW

By MICHAEL GOODMAN

IT MAY have been the strain of the controversy over Braque's "Yellow Cloth" that was responsible for the lack of critical excitement that would have given sparkle and illumination to the recent Mural Conceptualism show, at the San Francisco Museum of Art.

Only two years ago lay and duly appointed critics could not think of a punishment to fit the crime of a group of artists united under a banner—the name of which was said to be a "punster's paradise." Now the press is noncommital, while the public attendance is surprisingly varied. I wonder whether that effective new Wrigley poster, seen everywhere, helped to bridge the gap and indicate the conditioning of public taste to the offerings of the conceptualists.

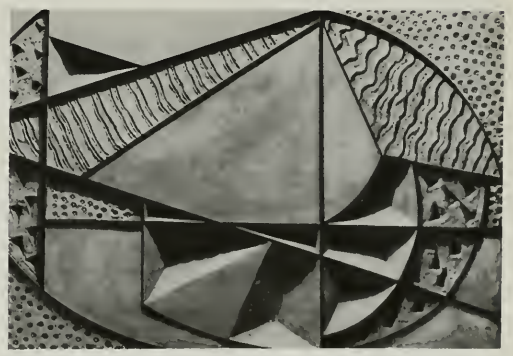
Just as in the days of the rift in the "American Subject" school, the show may be characterized as displaying a concern with the highly imaginative field of investigation into possibilities of abstract expression, etc., projection into which forms a vital part of one's artistic experience. So much for that.

If you want to know mine, an architect's opinion, they, the conceptualists, may not be providing any touchstones, but they are providing at least turning points, and, upwards.

Other schools have emphasized the futility of organized attempts at producing "group art." It is, they said, depersonalized and is enjoyed only by its cult. The old accusations are also to the effect that it is derivative of European influences, especially in its French affiliations. It has no umbilical attachment to the American spirit.

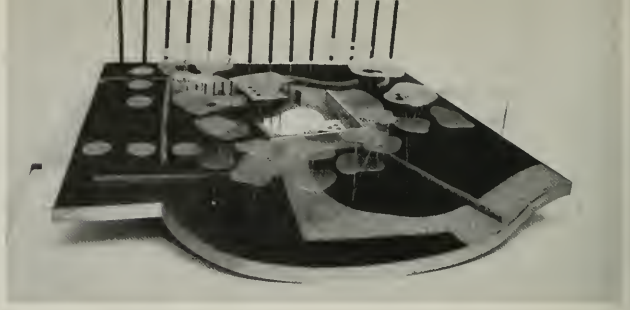
In my opinion, time has modified the picture. To begin with, we have here a number of artists who accumulated good disciplinary experience, derived after a completed series of Federal Art Projects, as part contribution to the rise of American culture. This enviable

View into the Museum's much discussed show of "Mural Conceptualism," with a model for a metropolitan parking station by Richard Neutra and a design for an aviation ticket office by Florence A. Swift in the background.



Florence Alston Swift's iron and concrete medallion, designed for a wall, screening the swimming pool on the following page.

Courtesy S. F. Art Association Bulletin



Thomas Church's model of a swimming pool is one of the many architectural small-scale constructions that were included in the exhibition of "Mural Conceptualism" at the S. F. Art Institute last month. "Mural Conceptualism" is a Bay Region art movement of great freshness and vitality, demonstrating successfully the close interrelationship of modern architecture and abstract design.

situation has resulted in an impressive disregard for fanciful materials as if the palette was restricted with maturing experience of the artists. Created patterns ran inevitably to the chosen materials. Familiar textures, basic and essential, enhanced the desire to touch. In many cases the artists produced a relationship to methods as well as to eye enjoyment. Nothing provocative, as the bed springs of yore, was used in this exhibition.

I felt that the plastic quality of the many-faceted examples gave promise to pleasant highlighting, and that plain painted surfaces faded as less intimate. I also felt that it may have signified a victory for the artist cause to be represented with some architects-exponents of a certain school of thought, of which major physical characteristic was color-blindness. I suspected right along that these architects had been averse to contribute to the development of the artists, and furthermore, held them, as craftsmen, categorically as inferiors. While on the subject of architects, a significant fact came to light, that whereas nowadays the general tendency among artists is to get away from the local scene, (and the ashcan) the architects are drifting more toward regionalism and adaptability to local conditions.

The readers may be regaled by the following story about one of the interesting contributions to the show. While a lady was being given candid bits of information concerning the model of a house to be built on a system of hexagon units, (a suspiciously Victorian hangover) she inquired as to how expensive such a house would be to build. "Well, you know, the price also goes up hexagonally," answered the informant.

Since my answer to the show is a resounding yes, I may take the liberty to make a few less friendly judgments, especially that I am one of the architect-exhibitors. I noticed that with a laudable solution of many problems, at times there was a persistence of the scale associated with that of easel painting. It may do good to more than one decorator to study the Baroque solution of the out-of-door scale of ornament.

How does one derive ornament, unless one has the kingdom of heaven within him? The artist has to have the means of endowing a work with the quality of human experience. Is it done by abstracting shadow patterns on a smokestack as Bragdon attempted? Does one have to persist in repeating realistically the end of an egg for the kitchen plaque and make it look too much on the protein side? Should a garage establishment be projected for the future, as if part of the promise of paradise, or should we deal with ever present realities?

To continue without malice, if I were to impose advice upon artists and patrons about the choice of medium, I would have ruled out fur murals in fur salons, in spite of the successful results exhibited; and not to disparage another nice study, why should radio parts be used for a broadcasting studio decoration any more than blueprints for walls in a den for a tired engineer.

I question whether or not the use of symbolism would promise more emotion, or evocation of mood, beyond that produced by mere reasoned pattern-quality in the work of the Conceptualists. Perhaps then, a successful abstraction will become more than an arbitrary arrangement. With that in mind let's look forward to the next exhibit.

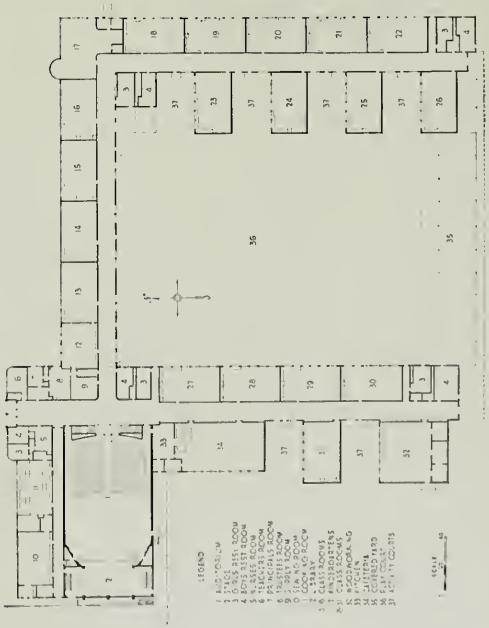
NT AND SIDE VIEWS OAKDALE UNION SCHOOL, OAKDALE, CALIFORNIA

RCHITECTS USE FUNCTIONAL DESIGN FOR SUBURBAN SCHOOL

ODAY 700 children who, less than 12 months ago, were going to school in small, widely ttered buildings, are housed under the roof one large, modern architectural concrete sroom and auditorium building, the design which was intended to inspire these future zens of America. The building has a maxi- m capacity of 800 and can be extended in orderly manner as may be required.

uilt upon a nine-acre site near the westerly ge of Oakdale, San Joaquin County, Cali- ia, Oakdale Union School represents the word in modern school design and equip- t. Oakdale School District is an amalga- ion of seven former school districts, the dren being transported from the outlying s by a fleet of busses. Inadequate, and in t ways obsolete, the old two-story brick mmar school at Oakdale will be razed and site used for other than school purposes.

etails for two alternate types of construc- were submitted to bidders, one based on steel sections used as studs for lath and ter walls, and the other based on reinforced crete walls. No proposals were received on



ENTRANCE DETAIL, OAKDALE UNION SCHOOL, SAN JOAQUIN COUNTY, CALIFORNIA
Frank V. Mayo and Eric Johnson, Associate Architects

the light steel construction, and since the two types were considered to be practically equal as far as cost was concerned, and the concrete design was considered to have certain distinct advantages, the contract was awarded for concrete.

The building is 380x300 feet, set back from the sidewalk across a strip of lawn 75 feet wide. It is U-shaped except for the projecting wing of the auditorium and flanking domestic science rooms. Three 12-foot wide corridors serve the classrooms about the central court, which is approximately 150 feet wide and 200 feet long. Across the rear of the court is the covered play court.

The school provides 18 classrooms of standard size, 23x40 feet, and additional rooms for domestic science, sewing, cooking and homemaking. The kindergarten is located in the northeast corner to provide maximum light and airiness and convenient access to parents who frequently bring their children to school. Manual training shop is located at the rear of the building, and a large, well-equipped cafeteria with kitchen is located just back of the auditorium. A door leads from kitchen to auditorium for service in the latter hall when necessary. Administration offices comprise space for superintendent, principal and their secretaries, conference room and teachers' rest room. Near the offices is the library and a nurse's room. Numerous outer doors are provided for rapid exit when the fire alarm is sounded.

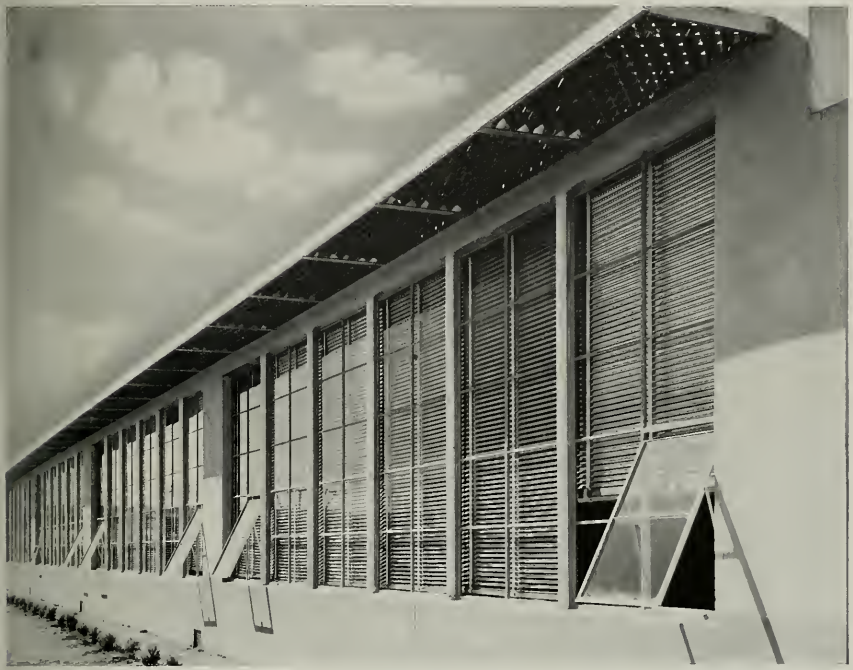
Webster partially defines "function" as the duty or business belonging to a particular station or character. In this strict sense, Oakdale Union School is a functional building and each unit or groups of units is planned to do a specific duty. The arrangement of the different grades and departments illustrate functional variations in the plan.

Elementary grades, up to and including the fourth grade, are located in the east wing. Each classroom has a hat and coat alcove for pupils, teacher's wardrobe and bookcases. Shelves and lockers beneath the long window make each unit complete for all the varying activities of the grade. Each room is also equipped with a small sink and drinking fountain.

Grades beginning with the fifth are departmental, and classroom hat and coat alcoves are omitted. Lockers are provided in the corridors convenient to the rooms used by these pupils.

As the classrooms are arranged in the plan according to group and function, so is the play

WINDOWS AND MORE WINDOWS, GIVE ABUNDANCE OF LIGHT



AWNING TYPE WINDOWS AND VENETIAN BLINDS PROVIDE GOOD VENTILATION AND SHADE

NURSERY MURALS BRIGHTEN SCHOOLROOM WALLS

KINDERGARTEN, OAKDALE UNION SCHOOL, OAKDALE, CALIFORNIA
Frank V. Mayo and Eric Johnson, Associate Architects

AUDITORIUM, OAKDALE UNION SCHOOL
Air Conditioned . . . Ceiling Lights . . . Motion Picture Facilities
Fully equipped stage for Amateur Productions

space arranged to serve these groups to best advantage, with due consideration to the ages of the children.

The interior court is the play yard for the lower grades. The rear yard, about six acres, is used for the larger children and is accessible to their classrooms, just as the interior court is adjacent to the elementary rooms. The large site offered unlimited planning opportunities as well as a challenge to create a building without the usual handicaps of cramped play space, undesirable lighting and poor ventilation.

The U-shape permits admission of either north or east light in every classroom. Most of the rooms in such a plan, normally parallel to the main corridors, obtain north or east light, but as some do not, the expedient of placing a number of classrooms at right angles to north-south corridors gives a unique arrangement which provides both north-east light to every room.

With the exception of the kindergarten, all classroom ceilings slope away from the windows at an angle of about 12 degrees. This was done to reflect the light that reaches the ceilings down upon the desks. It is a well-known fact that light entering the upper part of a window is two or three times more effective in lighting the blackboard opposite the window. Other lighting features are the metal Venetian blinds in the east rooms which can be regulated several times during the day to provide maximum illumination, and a special diamond-shaped cornice of metal extending the length of each east wall. This grid directs the light inward and cuts off much of the direct sun rays against the glass.

While the entire building was designed and detailed for the purpose of obtaining the most practical school structure, the architects were permitted unusual liberties in designing the kindergarten room. To completely charm the heart of every youngster who enters the room, the entire wall area above the blackboard line is decorated with a mural painting in colors depicting almost life-size scenes from nursery stories. Front windows conform to the main classroom fenestration for the benefit of architectural lines, but the long, low line of the building is effectually terminated by the projecting semi-circular glass brick bay window of the kindergarten, forming an interesting interior play alcove. On the east wall, however, the window sill is lowered two feet further, permitting the tiniest child to see outside.

Exterior walls through the one-story structure are eight inches thick concrete, as are the interior bearing walls. Exterior curtain walls of the auditorium and the one-story interior non-bearing walls are six-inch concrete. All walls are reinforced. Standardization of classroom plans permitted several re-uses of the plywood forms with but minor changes, but an average of four re-uses was made of each plywood panel to complete the structure.

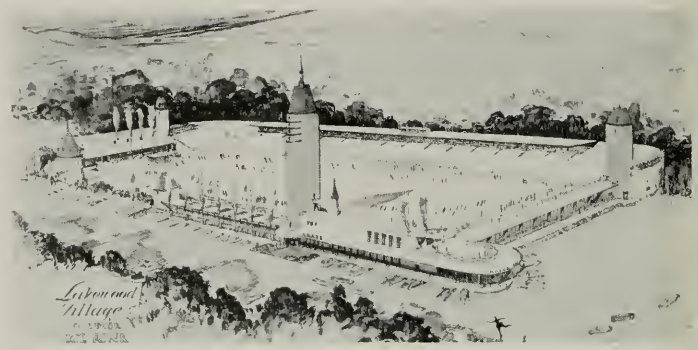
Except for a levelling skin coat, the interior concrete walls were not plastered or furred. This resulted in a definite saving. The exterior walls were lightly honed down without disturbing the form marks, and finished with a pale green stucco wash applied in two coats above the sill line throughout. Lower surfaces were finished with oil paint in a slightly deeper shade of green.

Classroom ceiling construction comprised sloping joints on 24-inch centers, lathed on the under-side with one inch of insulation and plastered. The top of the joists was sheathed diagonally and roofed with three-ply heavy felt built-up roofing finished with aluminum asphalt-base spraycoat.

Concrete floors are at grade throughout the building and are finished with asphalt tile cemented to the slabs. These tiles are in highly contrasting colors with borders. Black linoleum is used throughout as a wall base, cemented to the concrete walls and finished off with a small, polished aluminum cap molding. Light fixtures, except in corridors, are recessed into the ceilings and are placed generally about four feet from the inner walls of classrooms.

The building cost was 86 per cent of the total, while the equipment, furnishing and seating represents 14 per cent of the cost. Cost of the building, including all equipment, was $248,500, or $4.39 per square foot.

OUTDOOR ICE SKATING RINK AT LAKEWOOD VILLAGE, CALIFORNIA



Perspective of Ice Pavilion to be built near Carson Street and Lakewood Boulevard, Lakewood Village, Los Angeles County. The skating surface will be 240 x 90 feet. Preliminary plans have been prepared by Wayne D. McAllister.

OLD YEAR ENDS WITH FAVORABLE BUILDING OUTLOOK

DECEMBER building in Northern and Central California held up well with other months of the year, despite some unfavorable weather and spasmodic labor troubles. The building reports summarized here are taken from Architects Reports, published by ARCHITECT AND ENGINEER and sponsored by the Northern Section, State Association of California Architects. These reports are gathered from special correspondents and other sources and are not taken from the official records of city and county building departments.

- Much of the information is in advance of public record, particularly that given under the caption "Plans Being Prepared." Under this heading Architects Reports published jobs during December totalling $3,302,000. Under "Projects Out for Bids" the totals exceeded $15,000,000, while under "Contracts Awarded" the total reached $17,975,868. Grand total for the month reached $37,144,287, an increase over November of approximately $6,000,000.

The following is a classification of the three major divisions with totals of the more important items in each:

Plans in Preparation, December, 1939		
Residences	$ 87,500	
City, County and State	540,000	
Government	375,000	
Schools & Colleges	696,000	
Theaters, Clubs, Hospitals	660,000	
Office Buildings	120,000	
Stores and Markets	34,000	
Industrial	790,000	
		$ 3,302,500
Projects Out For Bids, But Not Awarded		
Residences	$ 35,000	
City, County and State	819,827	
Government	14,374,163	
Schools and Colleges	119,000	
Office Buildings	220,000	
Theaters and Miscellaneous	92,929	
Stores and Markets	30,000	
Industrial	175,000	
		$15,865,919
Contracts Awarded		
Apartments	$ 4,055,477	
Residences	217,029	
City, County and State	231,562	
Government	12,078,154	
Schools and Colleges	258,086	
Office Buildings	284,221	
Theaters, Churches, Misc.	234,950	
Stores and Markets	202,500	
Industrial	413,899	
		$17,975,868
Grand Total		$37,144,287

Editor's Note—One of the problems that faced the California Highways and Public Works Department upon completion of the San Francisco Bay Bridge, was to improve the appearance of the various approaches from the east end of the bridge. That they were unsightly is putting it mildly. With limited funds at hand the Department's landscape engineer, Mr. Bowers, made a careful study of the situation, prepared plans and with the awarding of miscellaneous contracts, supervised the grading of roadsides, planting of shrubs and other work. With completion of the landscaping now under way from the Distribution Building to the Toll Plaza on the south side of the highway, all of the approaches have been improved. The methods followed and a general description of the work is outlined by Mr. Bowers in California Highways and Public Works for December, from which the following article and illustrations are taken:

LANDSCAPING THE SAN FRANCISCO BAY BRIDGE APPROACHES

By H. DANA BOWERS, Landscape Engineer

DUE to the severe offshore prevailing winds often carrying salt spray completely across the road and the dredged sand and clay fill in which it was necessary to plant, the problems of plant material selection for the Bay Bridge approaches were many fold. The importation of top soil, installation of water lines, construction of curbs, parking areas and drainage control, all combined to make this the most costly to date of any California State landscaping project.

Preparation for landscaping was included in the roadway construction contract. The preparatory items and their costs were:

Installing Water Line Crossovers under Pavement	$ 7,052.37
Imported Topsoil	4,724.25
From 1937 Federal Aid Funds there was allocated:	
Installation of Curbs, Parking Areas and Water Lines (by Contract)	26,828.00
Planting Trees, Shrubs and Ground Cover (Force Account)	59,361.21
From 1939 Federal Aid Funds to complete the project:	
Planting Trees, Shrubs and Ground Cover and Install Water Lines (Force Account)	14,750.00
Total Cost of Project	$112,715.83
Cost Per Mile	$ 24,250.00

A solid screen planting was made on the east and south sides of the approach to obscure from view the industrial district and interurban railroad tracks immediately adjacent. Groups of Monterey Cypress in the screen planting were placed to break up the formality of the continuous shrub mass and create skyline effects.

All planting was done thickly in order that the plants would afford protection for one another. Shrubs that normally would have been planted from ten to fifteen feet apart were

FTH STREET PLAZA APPROACH, SAN FRANCISCO
ne severe winds have necessitated replanting with evergreen trees and lawn shrubs

planted from three to five feet apart.

All varieties used are doing exceptionally well to date with the exception of the Melaleuca nesophila at the lighting standards in the center dividing strips. These solitary plantings on the north and south section of the approach have not been able to withstand the burning winds. On the east and west section, however, they have been quite satisfactory as they are not subjected to the severe exposure of the north and south section.

It is interesting to observe on this project how the growth of the plants is affected by the various conditions of exposure. On the east and west section, from the Bridge to the Distribution Structure the road runs with the direction of the prevailing winds. The planting is for the most part in between the highway and the interurban railroad tracks. No wind burn or distortion is noticeable on any of the varieties.

From the Distribution Structure north, the conditions are more drastic, however. The slight protection afforded by Yerba Buena

Before—Dredged sand fill between east end of bridge and Toll Plaza. After—Ice plant ground cover on bayside and center strip.

Island and Treasure Island is sharply evident.

Traversing north toward University Avenue, Berkeley, a rapid change takes place in the condition of the trees and shrubs. The winds have an unobstructed sweep over the bay in from the Golden Gate, north of the islands, between approximately Folger Avenue and University Avenue. While the growth has been fair, their form is prostrate and there is some burning from the salt spray and wind.

Plantings against buildings in an area of "dead air" show no wind effects and have made a normal growth.

It is to be observed that under these conditions plants appear to succeed better in front of the windbreaks, rather than in behind, due of course, to the lack of eddies or drafts caused by solid windbreaks.

The following plant varieties and quantities were used on this project:

Acacia longifolia	5,411
Melaleuca nesophila	2,859
Melaleuca armillaris	2,549
Cupressus macrocarpa	596
Leptospermum laevigatum	2,010
Sambucus glauca	356

Typical planting of entire east shore approach. Group plantings along Berkeley Aquatic Park, with ice plant ground cover on bayside and center strip.

Improved roadside appearance provided by trees and shrub plantings that screen buildings on Moss Avenue approach in Oa

Myoporum laetum	200
Baccharis pilularis	846
Pyracantha yunnanensis	915
Mesembryanthemum edule	210,000
Mesembryanthemum croceum	105,445

In addition to 15,000 cubic yards of topsoil imported under the construction contract, 7272 cubic yards was imported for the purpose of back-filling planting holes. Thirty-six hundred and twenty-seven cubic yards of stockyard manure was mixed with the top soil and spread over the ground cover areas.

Before planting it was necessary to place all plant material in a semi-exposed location for several months for acclimatization. If this acclimatization is not done, even the hardiest varieties taken from the protection of the nursery would burn to the ground immediately under the force of the wind.

On the bay side all planting was confined to ice plant ground cover and notwithstanding the drenching it receives from salt spray it has made a satisfactory cover for which the only maintenance necessary is the trimming along the curbs.

The completed portion of the approach as it now stands is well established and is maintained by a crew of two men plus equipment and water costing some $5,000 per year.

The Fifth Street Plaza approach in San Francisco was planted in May, 1937, at a cost of $16,210.71. Large boxed specimen coniferous material was used to give an immediate effect for the opening of the Bridge.

Here, again, the prevailing winds have had their effect on the plants. It has been necessary to replace the Lawson Cypress with broadleafed evergreens such as Pittosporum crassifolium, Melaleucas and California Cherry, that are able to adapt themselves to the conditions.

The Coast Redwood, Thuya plicata, Incense Cedar, Blue Mt. Atlas Cedar and Cannart Red Cedar have done well toward the back, where they protect each other. Irish yew, Wissell Cypress, Phitzer Juniper and Japanese Boxwood have made a good showing under exposed conditions.

The lawn area contains 64,000 square feet planted to Seaside Bent grass.

On the East side of the Distribution Structure in Oakland the planting was sponsored by the city of Oakland installed with WPA labor. Many large Monterey pines 18'-20' in height were moved in to frame the structure approaches. Eucalyptus trees were planted between the distribution lanes and to screen from view the industrial district.

Consider Quality and Life of Neighborhood Before Modernizing

By RALPH T. WALKER, Architect

A FRIEND of mine sat opposite one night, on a diner, either Potash or Perlmutter, and the news that night was filled with what Congress was about to do with income and corporation taxes. "Look! What they do! Here in America we hev the goose that lays the golden eggs and what do they do with it? They milk it! They milk it!"

This subject can be handled categorically in one paragraph. All that is needed to modernize any building of any age is to put in new plumbing, heat and cool by air conditioning, decorate with a few stainless steel mouldings on some colored glass, double the foot candles whether the existing are two or twenty, paint every room a different color, put wall paper on the ceilings, then furnish with pipe furniture covered in zebra looking upholstery, and be sure if one illuminated sign is sufficient to buy another and a larger one with the newest gaseous tubes. The result is Q. E. D. increased income and complacent owners smoking the latest best advertised cigars. And as categorically, and with much more reason, we can eliminate the word **any.**

When we talk of modernization, of course we admit that there exists obsolescence. Now, first of all, modernization is not a panacea for all the ills of obsolescence, and one thing we should always remember is that in this fair land of ours there is, as perhaps nowhere else on earth, an ungodly amount of competition for each and every dollar of national income.

Modernization may mean remodeling, but it may also mean tearing down and starting afresh.

THE TRUE MEANING OF MODERNIZATION

Modernization means always that there has been progress in the development of new ways, and that old age finds itself in competition with youth. Some of this youth may be fashion only, and nothing goes through the seven ages of life quicker than fashion. Much of the present fashion is streamlined for the dust bin. When obsolescence is of the neighorhood kind, and we find it present in every city in America, it will take more than renewed mechanization to even bring back the vigor of middle age. The blighted areas in every city represent a great problem to all of us in the building industry because they are a burden upon society as a whole, and one which makes it very difficult to build anew. Obsolete neighborhoods are the dust bowls of urban property. It is equity that has been consumed instead of humus.

It is obviously foolish to attempt any modernization in the sense of alteration in a neighborhood that, no matter what is done, remains in disfavor as a place for either living or industry. Such neighborhoods generally require complete reconstruction. It is only possible to think of remodeling under these circumstances if the period of amortization for the new money can be considered as of very short duration, otherwise it too often is helter-skeltering the good after the bad.

Furthermore, the average blighted area in America can be safely modernized by new commercial building only if the enterprise is based on the possibilities of population growth or stability. In these cases the investment of new capital should not be thought of as possible unless there has been considerable planning thought given to the enterprise, because what we need most of all is modernization in the thinking about the whole problem of the commercial building as well as in the plumbing fixtures that may go in them.

ENVIRONMENT IS IMPORTANT

This stressing of neighborhood obsolescence is in the nature of a plea to all of us in the building industry to realize that money badly invested always reflects back on the desirability of further improvement. Increased income is not always to be assumed to naturally follow the installation of mechanical comforts. Axiom No. 1 in all modernization should be: What is the quality and life of the neighborhood?

Many of us either individually or as trustees have had guaranteed mortgage bonds. It fell to the lot of a great number of us to investi

gate these properties after the collapse. There were certainly a lot of lemons. Many were properties where the obsolescence of the building was disgraceful. Many, many geese had been milked in those happy days, until they could give down no more. You find them boarded up in every city. They are just so ancient that they cannot even respond to a ham and egg proposition.

But there are still plenty of bluebells among the thistles, and many buildings are still desirable and useful space. There is a bank building in Providence that has been occupied for over 120 years, and you could not get that firm to move except by the use of dynamite. The space is adequate to their needs and adds to the distinction of the firm by its very antiquity. It has been modernized again and again, added to, made sanitary and comfortable. Throughout the country are neighborhoods in which there are old buildings which, if properly replanned, could take on new life within the old shells.

It is almost axiomatic that space requirements do not change as rapidly as does the need for replacement of the mechanical.

Age in buildings does not necessarily mean that the attributes of senility are the same in structure as they are in men. Those of us who have had business on the continent will always remember the perfect suitability of space originally built as far back as the beginning of the eighteenth century.

Most space in this country is considered speculatively obsolete long before it is to be justly discarded, and this speculative quality of obsolescence is one that devours equity and loan alike. There are old hotels, for instance, which because of their high ceilings and generous spaces, can be modernized into much more desirable living spaces than can generally be found in more recent buildings. Again one can point to Europe, where it is possible to occupy, comfortably, rooms that date back several hundred years.

Stores that yesterday looked grimy can be made to bring in a new, if only the same income that made yesterday's rent rolls so pleasant to possess.

It is well to remember that part of the job that modernization must do is to maintain good incomes, and some do exist. Too often the goose suddenly starts laying china eggs just out of a sense of neglect. Modernization is whatever it is that is a curry-comb to geese.

AVERAGE LIFE OF A BUILDING

Someone in the glorious twenties made the rash statement that the life of a building is but twenty years. It was one of those remarks that seem to challenge fate, for as we all know there are many buildings to whose twenty years of life expectation must be added another and yet another score. Our viewpoint in 1939 is slightly different than it was in 1929.

Let us not despair, however. Some day the national income will permit the purchase of new buildings as well as new automobiles. And when it does, should we not again consider the planning idea so as to make future modernizations easy rather than jobs of excavation.? It might be maintained still that there is a twenty-year life in most buildings. Even if the building itself may be useful to a hoary antiquity, it is obviously not possible for the mechanical parts. For the present at least we are on the threshold of continuing new ways of achieving comfort, but always there are three horns to this dilemma—we would like to possess the new, we haven't paid for the old, and it costs too much to tear out the old. Once you start modernization it is surprising how many old cracked shoes without a shine peep out from the skeletons in the closets.

Another deterrent in the modernization of old commercial buildings is that a great number were built for special purposes which no longer are in existence. Many office and loft buildings are not flexible in offering opportunities in a new use of space, and so they are difficult to bring up to date, even though the neighborhoods are revived and the structures are sound.

It seems that there is another axiom: Plan for continuous modernization unless you wish to be suddenly faced with a complete shock to the building's metabolism; there is need to plan for the modernization of twenty years hence as well as that of today, no matter how difficult you may find it to sell today.

And we all know that the building industry for most of us is no blooming bed of roses.

It is entirely possible to so plan most new structures that a greater flexibility will be achieved, and especially in considering the need of replacement of mechanical features. At the end of the boom we were just beginning to understand ways and means of prolonging the life and use of buildings.

Another friend of mine, a member of one of the early Quaker attempts at civilizing the Bolshevik, told me that the most interesting person she met in the Ukraine was a Commissar of Spare Parts. As an architect, looking over the immense field of things with which to modernize, I fail to find any assurance that there will be any spare parts in the world of tomorrow fitting their gadgets of today for those clients who, accepting the inevitable, try to do something before their sons say: "And Dad, what did you do in the great depression?"

It is quite possible that we are trying to be even more rash than those prophets who claimed the building life span at twenty years, in so carelessly exposing gadgets that they die in their babyhood.

NO MONEY FOR COMMERCIAL BUILDINGS

Strangely enough, although we all know that there is a needed movement to spread the benefits of mechanical civilization, there is a marked reluctance for new money to find its way into commercial building. Articles and trade journals all have had their purpose in helping to create sales talk. The acres of ink and the cubic tons of hot air that have been spread to help build up work for all of us may be preparing the fields for another year's harvest, but there is still a reluctance for new money to find its way into commercial buildings whether new or old.

There was indication at the beginning of this article that there is an active competition for the dollars in our national income. This competition for the income dollar is one that is surely delaying the growth of modernization in the commercial buildings in the country.

Another axiom: First there must be tenants and then they must be able to pay the rent.

Of course you can say, with much truth, that new bathrooms and air conditioning are productive of better income, that as the techniques improve better lighting is available and should be used, that altogether they make for the better comfort of worker and customer alike. But the difficulty is that each remodernization is a distinct problem which needs the services of a clinical group and at best is costly, so that when all is said and done we still face the fact that first you must have the possibility of tenants and tenants who pay their rent, and the rents are about as high as the present market will stand.

How can we get more of the national income, or can we increase it ourselves so that every possible opportunity for modernization, new as well as old, can be made of advantage? You know the answer as well as anyone.

There is no question that advertising helps. There has been an enormous advertising appeal for instance in the new comfort—air conditioning. And there is no question that the theaters, stores and restaurants that have availed themselves of this comfort have much to offer when they are pioneers, but when the world follows it becomes a maintenance item which, like the ventilation of yesterday, will be closely scrutinized as to whether or not it is really justified.

We live in a world that can make things, things galore. We talk a great deal about economics when mostly we mean the gathering of statistics. So who knows whether the gloom of the last six years may not become the boom of the next? All that can be said about modernization is that if you want to sell it you have a man's job ahead of you. The claims on the national pocketbook are many and varied, and the desires for them are being whipped up by clever advertising.

Courtesy Southwest Builder and Contractor

SANCTUARY OF OUR LADY OF GUADALUPE, LOS ANGELES

The church will be of reinforced concrete and will seat 800 persons. The cost is estimated at $150,000.

Henry Carlton Newton, Architect
J. Earl Trudeau, Associate

LIMIT HEIGHT OFFICE BUILDING FOR HARRY BEAUMONT, MOTION PICTURE DIRECTOR, BEVERLY HILLS, CALIFORNIA

Claude Beelman, Architect

TIMBER "FAMINE" PROPAGANDA CALLED ADVERTISING HOOEY

By WILSON COMPTON*

FIFTEEN years ago the President of the United States established a national committee on wood utilization, a cooperative public and industry enterprise. Its objective was simple: Intelligent Forest Conservation. It coined an expressive slogan: "To Conserve our Forests —Use Wood and Use it Wisely." This activity in another form but for a similar purpose, is continued today in the Forest Industry Conference, also an undertaking in public and industry cooperation, and also under the auspices of the Departments of Agriculture, Commerce, and the Interior.

For the consideration of engineers and of teachers of engineers I shall seek no more authoritative starting point for discussion of American forest conservation than the simple appeal of this national committee, namely, "Use Wood and Use it Wisely."

This has three important implications:

1st. If we wish to save our forests we should freely use their products;

2nd. We should avoid preventable forest wastes; and

3rd. If we use our forests wisely and their products freely and without needless waste, nature will restore the forests.

There is no other country in the world to which so simple a conservation formula is so well adapted. Relatively we in this country have always had, we still have, and we will continue to have the most extensive forest resources available to any people. They are the most diversified. Including both softwoods and hardwoods, they furnish practically every useful type of wood known to the commerce of the world. Even more important, our forests with minor exceptions are accessible to transportation and to convenient industrial and commercial use.

Forest protection; wise use of forest products; and natural reforestation! This is the simple basic conservation formula.

OPPORTUNITIES IN FOREST FIELDS

In terms of potential I doubt that any of our major natural resources offer to the scientist or the engineer more important and more extensive opportunities. Forests like farms, and forest products like farm crops, are so familiar as to be taken for granted. The lumber industry is the oldest American industry; geographically the most widespread; nationally the most familiar. Some of you see in it only the material for framing and covering of houses and barns; for the structure of bridges and towers, wharves and docks; or just as something which may burn or rot or be eaten by termites. Yet there are 48 industries in the United States using 10 million feet of lumber annually. There are over 4,500 identifiable construction and industrial uses for timber products as compared with 950 for steel, its nearest competitor; and about 600 for paper and pulp which in turn are largely forest products.

The diversified uses of wood products the world over are being aided by preservative and protective treatments, by fire-proofing, glues, laminations and plywood; timber joint connectors; and the reassembly of natural wood fibers in controlled form by pulping; by the explorations into wood micro-cellular structure and by the modern derivative chemistry of wood cellulose and lignin. These are creating new industries and new jobs.

If wood is the most widely useful material of industry it is due largely to this range of diversified mechanical, physical and chemical uses. Mechanically, weight for weight, it is one of the strongest materials known. Chemically, it is the most prolific provider of cellulose. An acre of pine trees in Georgia, for example, will produce four times as much cellulose as the same acre in cotton, and in a much more economically harvested form. That fact alone I predict will eventually mean a million more jobs in the South.

So I enumerate five general characteristics of our American forests and American woods which, as it seems to me, are significant from the engineering standpoint:

1st. Versatility of qualities and physical characteristics.

2nd. Wide distribution and abundance of supply, both present and future.

3rd. Convenient accessibility.

4th. Indefinite renewability at low cost, a characteristic shared by no other major natural resource.

5th. Prodigious growth and economical assembly of raw material.

"TIMBER FAMINE" PROPAGANDA

Drastic prophecies of timber famine and national misjudgment of timber supply prospects thirty or forty years ago, encouraged private timber investment and timber speculation, particularly in the West, on too large a scale. Again during more recent years, repeated public warnings of timber shortage and of the imminent prospect of high prices have been one of the great factors in encouraging the substitution of other materials for timber products.

Much of this substitution has been due, of course to the clear superiority of other materials. To that extent it is sound and desirable and should be permanent. But there is reason to say that much of it also, has been

*Secretary and Manager National Lumber Manufacturers Association, Washington, D. C. Part of an address delivered at 47th annual meeting, S. P. E. E., State College, Pa.

due to unfounded anxiety over the permanent availability of suitable lumber and timber products, unjustified fears of prohibitive prices, and a vague but potent under-current of public impression fanned by zealous competitors that rather is it a patriotic duty to aid forest conservation by refraining from the use of forest products. Abandonment of their use for these reasons is unsound and has tended to discourage and retard conservation and reforestation.

In Continental United States are 630 million acres of forest land. That is almost exactly one-third of our total land area. Of this about three-fourths is Commercial Forest Land. Over one-fourth of this is in public ownership; nearly one-third is in farm wood lands; and less than one-half in the ownership of individuals and lumber and timber companies.

Not quite one-half of the Commercial Forest Land area is in saw timber. One-fifth is in merchantable cordwood. One-sixth more is in fair condition of reforestation; and one-sixth is substantially barren of commercial regrowth. The national commercial timber supply in 1938 was 520 billion cubic feet. The annual removal by cutting is 11 billion; through destruction by fire, insect and disease, 2 billion; and the estimated annual drain, therefore, 13 billion feet or about one-fortieth.

Offsetting this drain is a present annual growth of 11 billion cubic feet; and a prospective growth on lands now bearing old-growth or virgin timber, of an additional 3-1/3 billion cubic feet. This means a total present and prospective annual growth on the Commercial Forest Lands a billion cubic feet greater than the present estimated annual drain from all sources.

This means that if all our old growth or mature Commercial Forest Land areas are cut-over—as eventually they should be—and if these lands grow new timber at a rate no greater even than the average rate of growth on the forest lands already cut-over, the annual commercial timber growth will exceed the annual commercial timber drain—including timber now destroyed by fire, insect and disease—by more than a billion cubic feet, or by 8 per cent.

This is true of the forest area of the Nation as a whole. It is also true individually of 4 of the 6 principal timber regions: the Northeastern States, the Lake States, the Southern States, and the Pacific Northwest. It is true in the Lake States, however, only because forest depletion during the past years has so vastly reduced the rate of timber cutting in that region. It also is not true of the Central States where the drain will exceed the growth by nearly 60 per cent; nor in California where the drain will still exceed the growth by 18 per cent; and in the Douglas fir region of Western Washington and Oregon where the excess would be 14 per cent.

But in California, if the further cutting of virgin timber leaves the forest land in a condition for reforestation only as favorable even as the so-called "cordwood areas," the annual growth will exceed the drain by 7 per cent, and on the same basis by 4 per cent in the Douglas fir region which for many years has been, and for many years will continue, the source of the heaviest timber cutting.

TIMBER ENGINEERING JOBS GO BEGGING

The U. S. Bureau of Standards, in a recent report entitled "Materials Improvements," states in part:

Wood continues to improve its standing in the engineering field. Grading, standard working stresses for structural timber, better practices in the preservative treatment of wood, more efficient timber joints, the introduction of laminated construction and an increasing use of structural plywood are some of the factors which have brought this about. . . . The use of metal dowel connectors for timber framing continues to grow.

We have ourselves during this period been making other tests. We have developed many improvements in the Connectors themselves and in the system of Connector construction applied to our American woods. In all this time our greatest single difficulty has been to find engineers who really knew how to design structures economically in timber—in fact, to design structures in timber at all. Engineers everywhere seemed to know how to design in steel and concrete. In their schooling, timber design evidently—and with a few exceptions—had been a forgotten subject or a neglected art. We sought engineers who could teach us. But for the most part our little Timber Engineering Company has had to teach them. As I left our office yesterday the General Manager of the Timber Engineering Company told me that after several weeks of inquiry, he is still looking for a young engineering school graduate with two qualifications: First, that he have some competent background of education in timber design; second, that he desires a good job. He says there are many who would take the job but so far none who know how. So perhaps again we will do what some engineering school could have done but didn't do.

I cannot but believe that the "timber famine" propaganda of past years has been partly accountable for this deficiency in engineering interest in timber products. It seems now, however, so far as forest conservation is concerned, that industry, Governments, the public and the schools have at long last quit "fighting windmills." If that is true we have at least made that much progress.

With the Architects

RADIO STATION COMPETITION

A competition for the design of an ideal building in which to house a 1,000 watt radio broadcasting transmitter has been launched by the Beaux Arts Institute of Design. It is open to students of all architectural schools and ateliers in the country. Announced purpose of the competition, which is sponsored by the Western Electric Company, is the stimulation of interest in the design of specialized structures for radio broadcasting purposes.

The competition began January 8 and closes May 1, at which time all entries must be filed at the institute's headquarters, 304 E. 44th Street, New York City.

Final awards and announcement of the prize winners will be made by the judges on or before May 15. The jury will include Andre Fouilhoux of Harrison and Fouilhoux; Ralph T. Walker of Vorhees, Walker, Foley and Smith; Alfred Fellheimer of Fellheimer and Wagner; J. R. Poppele, chief engineer of radio station WOR; and Ely Jacques Kahn.

ROME FELLOWSHIPS

The American Academy in Rome has announced its annual fellowship competitions for the current year, but with the understanding that if because of the European situation the trustees should deem it unwise to send its fellows to Rome, the Academy reserves the right to call off the competitions or to cancel the awards or to offer the appointees the option of deferring their fellowships or of fulfilling them in America.

The competitions are open to unmarried men (in classical studies to men and women) not over 30 years of age who are citizens of the United States. Residence and studio are provided without charge at the Academy, and the total estimated value of each fellowship is about $2,000 a year.

Information may be obtained from Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York.

DWIGHT JAMES BAUM

Dwight James Baum, eminent architect of New York, died suddenly December 13th. He was a Fellow of the American Institute of Architects and had just succeeded the late D. Everett Waid as architect for the Institute in studying the problem of an office building. With him was associated Otto K. Eggers.

Dwight Baum had been an outstanding figure in his profession and particularly in the field of domestic architecture.

ENGINEER OPENS OFFICE

John J. Gould announces that he is in private practice as a consulting structural engineer at Room 321, Financial Center Building, 405 Montgomery Street, San Francisco.

BURTON DONALD CAIRNS

Burton Donald Cairns, district architect of the United States Farm Security Administration and a prominent figure in San Francisco's architectural circles, was killed in an automobile accident near Tigard, Oregon, on December 15. Mr. Cairns, who was 30 years old, was on an inspection tour of migratory labor camps in the Northwest when the accident occurred.

A graduate of the University of California's architectural school in the class of 1930, Mr. Cairns later received a Master of Arts degree and served as a teaching fellow in architecture; in 1931 he was awarded the American Institute of Architect's medal as the year's most distinguished student.

After he left the university he served in various capacities for the San Mateo County Planning Commission, and in 1935 he entered the field of architectural planning for the Resettlement Administration. He had headed the western architectural division of the Farm Security Administration since 1937.

Mr. Cairns is survived by his widow, the former Emmy Lou Packard; his mother, Mrs. Catharine Cairns, and one son, Donald.

Garrett Eckbo, landscape architect for the Farm Security Administration who was injured in the accident, is recovering in a Portland hospital and will be able to return to his home in San Francisco this month.

SEATTLE HOUSING EXPOSITION

Educational features will dominate the Second Annual National Housing Exposition of the Pacific Northwest, which will be held March 30 to April 7 in the Seattle Civic Auditorium, according to Joseph P. Sheehan, managing director, 704 Lloyd Building, Seattle.

700 LOW COST HOUSES

Plans for the $3,000,000 700 low-cost frame houses in Seattle are being prepared under the direction of an architectural board comprised as follows: Chairman, J. Lister Holmes, New World Life Building; John T. Jacobsen and William J. Bain, Textile Tower; George Wellington Stoddard, Orpheum Building; and William Aitken, 408 Marion Street, all Seattle, Wash.

OCCUPIES NEW STUDIO

Guy L. Rosebrook, architect, has moved to his new studio at 13565 Ventura Boulevard, Los Angeles. Mr. Rosebrook formerly practiced in San Francisco, later becoming architect for the Standard Oil Company of New Jersey. He has been practicing in Los Angeles since 1936.

CHANCE TO SEE THE DERBY

The Institute has selected Louisville, Kentucky, as the place of its seventy-second convention. The dates are May 19 to 25, inclusive.

Public Housing and Slum Clearance in Oakland, Los Angeles, Honolulu

WITH two USHA-aided projects approaching the construction stage, Oakland, largest of several cities which comprise the East (San Francisco) Bay District, last month received approval of a loan contract for a third development to relieve an acute shortage of decent dwellings for its low-income families.

The two previously approved projects, both of which are in the "West Oakland" section of the city, will provide a total of 556 dwelling units. The third project planned by the Oakland Housing Authority will consist of attractively arranged 1- and 2-story row houses. A separate administration building will provide ample space for social and recreational facilities, and there will be surfaced play areas for children. Community laundry facilities also will be provided.

Oakland's population at the end of 1938 was estimated to be 311,000, representing an increase of about 8,172 families since 1930. During the same period, however, the net increase in dwelling units amounted to only 5,038, or 3,134 short of the estimated gain in the number of families. In this connection the application reported:

"The reluctance on the part of financial institutions to advance loans in blighted areas and the lack of new residential construction and improvement, create a serious housing problem. Unless low-rent housing projects are constructed, continued expansion of the blighted areas is inevitable, thus making slum conditions in the city more acute."

The shortage of decent homes for low-income families in Oakland was said to be acute. In 1936 a Real Property Survey disclosed a vacancy of 6.2% throughout the city, with more than 30% of all vacancies in structures which either needed major repairs or were entirely unfit for occupancy. In March 1938, a survey by the Oakland Real Estate Board showed that the vacancy ratio had dropped to 2.3%, and there are indications that vacancies have steadily decreased since that time.

The Real Property Survey figures also showed 11,066 dwellings, out of a total of 96,505 surveyed, were in need of major structural repairs or were unfit for human habitation. There were 4,876 dwelling units without private bathing facilities and 3,446 without private indoor toilet, while 17,171, or more than one in six, were without installed heating equipment of any kind. The survey disclosed 599 dwelling units in which extra families were housed.

The Housing Authority of the City of Oakland, with offices at 1924 Broadway, is headed by Chairman F. A. Ferroggiaro. Other members of the Authority are J. P. Brennan, Norman Ogilvie, Charles D. Carroll and Hugh S. Rutledge. Warren E. Sisson is executive director and secretary.

SLUM CLEARANCE IN LOS ANGELES

Los Angeles, where one USHA-aided housing project of 610 dwelling units is now under construction, has recently received approval of a second loan contract to finance 90% of the cost of three more such developments to provide about 896 more decent dwellings for the city's low-income families.

Thus with completion of "Ramona Gardens," the project under construction, and the three others contemplated under the second contract, Los Angeles will have about 1,506 public housing units in which to rehouse families of slender means who now are forced to live under substandard conditions.

One of the three new projects will provide about 200 dwellings, the second about 400 and the third about 296, all in 2-story row houses and 2-story flats of fireproof construction throughout. Each kitchen will be equipped with cooking range, refrigerator and combination sink laundry tray. Space will be provided for tenant assemblies and craft work, and there will be surfaced play areas for the younger children.

Private enterprise "has not succeeded in building an adequate supply of decent, safe and sanitary dwellings for the use of families of low income," the local Authority reported. During the nine years 1930-38, while the population was increasing by an estimated 89,877 families the net gain in new dwelling units fell 31,754 short of that figure, the application set out.

The city's population in 1938 was estimated by the California Taxpayers Association at 1,540,000, nearly treble the 1920 census figure of 576,673.

In the language of the local Authority:

"The slums of Los Angeles are peculiar to the city in that they consist primarily of blighted areas containing single family residences rather than the multi-story tenements. Owing to the depression and the blighting effect of industry in the areas of the city immediately adjoining the major commercial areas, these sections have now become extensive blighted areas."

A recent survey of 19 areas of bad housing in Los Angeles disclosed that, although they house less than 15% of the city's population, produce 37% of all its felonies.

SLUM CLEARANCE IN HONOLULU

Honolulu's third offensive against slums described by the local Housing Authority as "difficult to equal for their dilapidation, squalor, dirt and a dangerous lack of sanitation" is made possible by the loan contract approved for $1,012,000. The project will provide 221 decent dwellings for low-income families now forced to live in the city's slums.

Under the second loan contract, for $1,841,000, another project of 390 units is scheduled to get under construction early next spring. Thus with the 122 units planned in the project contemplated under today's loan contract, Honolulu will have a total of 733 units in public housing when its immediate program is completed.

The project planned under the latest loan contract will consist of 2-story duplex houses and 2-story flats,

with equipped kitchens and bathrooms, including individual gas-fired hot water heaters and combination sink and laundry trays. Social rooms will be provided for the tenants' community activities, and there will be surfaced play areas for the children.

A partial survey of the local Housing Authority indicated that 3,118 families were living under substandard conditions. A recent check of slum areas in Honolulu disclosed a total of 3,326 persons, of whom 682 were children, living together in a group of so-called "tenements" having a total of 741 rooms. Hawaii's Public Health Regulations define a tenement as "the residence of three or more persons living independently of each other and . . . having a common right to the . . . water closets or privies, or some of them."

Thus the local Housing Authority observed:

"The use of the common toilet by several families is the worst feature of the tenement. It is a definite menace to the health and morals of the community. All the tenements fall definitely into the classification of substandard."

STEEL WINDOW STANDARDIZATION

Substantial savings in construction costs for public re-housing projects during 1940 are anticipated as the result of a standardization of steel window casements just effected by the United States Housing Authority and manufacturers of these structural units.

About 135,000 steel window casements, it is estimated, will be used in USHA-aided slum clearance and low rent housing projects throughout the country this year. The total savings on this quantity by the use of the standardized unit would be about $80,000, USHA technicians assert.

Installation costs, as well as cost of material, will be reduced, they say, because of reduction of many sizes to a few standard sizes. The work of installation also can be simplified and the number of operations reduced to a minimum.

Five sizes of steel casements, instead of approximately 50 now being used, have been agreed upon by technicians of the USHA and manufacturers. They will be recommended to local housing authorities planning their USHA-aided projects. It is expected that these standardized sizes will be used in at least 90% of the 1940 construction on the USHA program.

The standardized casements are specifically adapted to the sizes of rooms generally used in low-rent housing projects, based on a range of standards, from minimum to maximum, set up by the USHA. They are designed to admit sufficient light without excessive glass area and therefore to prevent unnecessary loss of heat in cold weather.

The standardization applies particularly to the ventilator, or movable section, of the windows. When windows wider than this standardized unit are required, they will be flanked with fixed lights; or two of the standardized sections will be installed.

A feature of the windows, which also contributes to cost conservation and will be hailed with delight by housewives and their helpmates, is that the standardized casements will include fixed attachments for shades and curtains. The casements will be drilled by the manufacturers for installation of a durable and economical attachment that will readily receive and securely hold any of several common types of curtain rods and window shades.

The standardization of steel window casements is one of the first steps in a program in which USHA technicians and manufacturers are engaged to standardize various structural and equipment features in USHA-aided projects.

U. S. AS VIEWED BY AUSTRALIAN

H. R. MacCauley, a young Sydney architect and graduate of the School of Architecture, Sydney Technical College, recently returned to his native city after spending three years on the Continent and in the United States.

Mr. MacCauley was particularly impressed with modern architecture in Switzerland, especially as portrayed in the Swiss National Exhibition at Zurich. The French International Exhibition held in 1937 was also outstanding, in his opinion.

Mr. MacCauley was favorably taken with the New York Fair, particularly the famous "World of Tomorrow," produced by General Motors, and which made a profound impression upon all those who viewed it.

The young traveler said in his opinion the exhorbitant charges for admission and for everything else associated with the Fair were largely responsible for its financial losses.

The New York buildings impressed him very much, particularly the Rockefeller Center. The Radio Center Theater, he said in an interview with a representative of "Building," published in Australia, is the finest and most impressive structure of its kind he has ever seen.

Architecturally, things were fair in America. The offices were not busy but were generally plodding along, he concluded.

FOR SEATTLE TRANSPORTATION SYSTEM

Preliminary studies for the maintenance and housing of the equipment to be obtained for Seattle's proposed new municipal transportation system are now being made by members of the architectural firms of McClelland and Jones, Republic Building, and Thomas, Grainger and Thomas, Arcade Building, associate architects retained by the Municipal Transportation Commission of the City of Seattle, County City Building. Information gathered on trips to the middle West and Oregon and California is being prepared for presentation to the commission.

REALTY MARKET IMPEDED BY TOO MANY "OVERHANGS"

UTILIZATION of the services of reputable brokers in every community to dispose of the vast number of repossessed properties "overhanging" the real estate market, is urged by Ivan D. Carson, Deputy General Manager of the Home Owners' Loan Corporation, in charge of its property management.

Mr. Carson has directed the selling of 72,000 homes —with sales running more than 4,000 monthly at the present time. Listing of HOLC acquired properties with 25,000 approved real estate brokers has had an important part in the success of this huge merchandising program, Mr. Carson said.

Pointing to a residential real estate "overhang" with a book value of $4,000,000,000 as one of the chief problems of the real estate market, Mr. Carson asserted that the experience of the HOLC shows there are two other principal factors in the orderly disposal of foreclosed properties. These are:

1. Willingness to accept the market price for repossessed properties rather than hold them for speculative profits.
2. More general use of small down payments and long-term, amortized loans with low monthly carrying charges.

"The holding of thousands of properties by financial institutions retards discovery of the real estate and home mortgage markets," Mr. Carson said. "Full realization of the benefits of an expanded program of new construction is likewise retarded. Institutions which have a large portion of their resources frozen in real estate contribute little to new mortgage lending. This condition also does not encourage people to invest rather than hoard, and it is true that many repossessed properties represent non-earning assets. For these reasons a speedy and orderly assimilation of the real estate 'overhang' is one of the most important tasks confronting mortgage lending institutions.

"In the past two years, home-financing institutions have come to realize the necessity for quick and orderly liquidation of real estate overhang, and progress has been made. However, a great deal of work remains to be done, and further efforts will be required to bring us anywhere near to a solution of the problem. There is still a broad demand for repossessed homes, and if the task is faced realistically, they can be moved speedily and in orderly fashion from unwilling hands back to individual home owners.

"The magnitude of the HOLC operations, involving the management and sale of over a hundred thousand residential properties all over the United States, shows clearly the need for a systematic, realistic and carefully planned procedure in the liquidation of repossessed homes."

HOME BUILDING COSTS LOWEST IN TWENTY YEARS

If you ever hope to own a home, now is the time to build it, is the opinion of W. H. Lowe, president of The Paraffine Companies, Inc., San Francisco.

"Costs to build a house per month are lower today than at any time in 20 years," reports Lowe. "Financing charges under the F. H. A. are less costly than they have ever been in modern times. Your dollars today will buy you a larger and a better home than ever before."

Within a few months, however, Lowe expects these conditions to change sharply. In the war of 1914-18, building costs went up more than 200 per cent. A like increase will accompany the present hostilities, he anticipates.

"There is, therefore, every reason for building your own home today," concludes Lowe. "If you pay cash or handle on credit you may expect a large increase in value of your investment in the next few years.

"In either event, when the rents of your less fortunate neighbors go up—they doubled in the last war —your expenses for shelter will remain constant."

The home-builder's dollar brings him more today than it ever has in the past, declares Lowe, and probably more than it will for a number of years in the future. The average price for construction materials at present is 15 per cent or more under the 1920-30 average, and modern science has made great improvement in the characteristics of the materials themselves since that time.

"Low interest rates and convenient terms also have cut the cost of the modern house. Since every family must pay rent if it does not own its own home, the monthly cost of buying is equally as important as the entire amount of money involved. The F. H. A. plan, which not only enables one to borrow for home construction at 4½ per cent, but also allows repayment of the loan over periods ranging up to 25 years, makes present-day home construction expenses the lowest per month in modern times."

This favorable situation cannot be expected to continue, according to Lowe. Prices of many commodities already have moved upward as business enters the rising cycle. Building costs cannot be expected to lag far behind. In the world war period of 1914-18, they rose 65 per cent in the first three years, and by 1920 were up to 218 per cent of the 1914 level. A house which cost $5,000 in 1914 was worth $11,000 in 1920.

Financing costs also may be expected to rise, in the opinion of Mr. Lowe.

ARCHITECTS' BULLETIN

Issued For

THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

Northern Section

STATE ASSOCIATION MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

Editor
Harris C. Allen

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State Association Shows Progress

AT A recent meeting of the Building Industry Conference Board, an architect, a contractor, and a producer all expressed and explained their belief that real building activity would develop by spring, and that 1940 would produce a larger amount of private building than either of the last two years. Little change in costs may be expected; and it was pointed out that the price raises of certain materials represented a very small percentage of the total cost. Considering the quality of material and equipment now standard, the cost of building operations compares favorably with the standards of pre-depression years.

The present lull in building preparation should be endured as patiently as possible by architects, with the anticipation a decided increase in private business as the year proceeds.

ARCHITECTURAL SERVICE

The question of what constitutes architectural service arises again in connection with a publicity campaign being carried on in the Bay area, in connection with one of the Treasure Island model homes which has been moved to a permanent location. The Redwood Association—always appreciative of the architect's position—has issued a folder which emphasizes the need for architectural design, plans, advice and protection, for homes of all sizes, and states that any architect will explain to the prospective home-builder the different kinds of architectural service.

The ideal of complete service must, of course, be maintained, as the most satisfactory to all concerned. This, however, is not mandatory under any code or system, and there are several conditions which may justify an architect in providing a limited service for a lower fee. The American Institute of Architects is developing such a service with the collaboration of the Producers Council and the Home Owners' Loan Corporation, in which much of the routine work is handled or standardized to lessen the overhead cost to the architect.

There are also cases when the owner relieves the architect of all legal and paper work, or acts as his own contractor and there are cases when the same plan is repeated with little or no variation.

In all cases, architects should be able to determine their services and fees to fit specific conditions, as may be fair to both parties.

LICENSE TAX

The Association, through the San Francisco District Society, is watching closely the transactions in regard to the city license tax. This tax has not been collected for several years, after a court decision declaring the tax unconstitutional as being a revenue and not a regulatory tax on business and professional firms. Since a recent Supreme Court verdict has reversed the former decision, the Tax Collector is required to collect three years' delinquent taxes with 25% penalty.

To prevent such an obvious inequity, the Supervisors have passed the first

hearing of an ordinance to repeal this tax, but with the understanding that after the required legal period a new tax will be levied.

The Association takes the stand that such a tax should be a flat fee and not, as at present, one based on gross income. A fair fee as a license for doing business under the protection of a city government, should meet no objection from architects or other professional or business firms.

The point of what, or how much, protection architects do receive, is worthy of consideration.

The San Francisco situation may have a bearing on licensing rules in other communities.

CO-OPERATION

The State Association takes an annual membership in the California State Chamber of Commerce, and in the San Francisco Chamber of Commerce, through the District Society. The value of joining with these public bodies, and securing their co-operation in policies or measures which concern us, is apparent.

1940 COMMITTEES

The following committees have been appointed by the Executive Board:

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4. Weeks, Harold
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10. Knowles, Wm. H.

C. W. KRAFT HONORED

C. W. "Chuck" Kraft, president of Kraftile Company, Niles, California, was elected chairman of the Northern California Section of the American Ceramic Society at the recent annual meeting.

Dr. T. K. Cleveland, chief chemist, Philadelphia Quartz Company of California, was elected vice-chairman.

Graham R. Smith, N. Clark & Sons, was named treasurer, and George A. Page, Stockton Fire Brick Company, secretary.

ARCHITECTS MAKE TRIP TO GRAND COULEE DAM

By VIRGINIA MURRAY

GRAND COULEE DAM . . . where trainloads of concrete are being flung across a wide valley, and all day and all night the lights on the construction and the thin piping of the shuttle trains form a perpetual mental backdrop for this most amazing and incomprehensible work.

This was the setting for the joint meeting of the Oregon and Washington Chapters of the American Institute of Architects on November 4 and 5. A rather large group of Seattle and Portland architects drove to Coulee in their own cars, and the Spokane contingent arrived on Saturday and Sunday morning.

Saturday morning, at 7 a. m., to the surprise of all, 15 Seattle architects, or architects-by-courtesy, climbed into a bus in front of the Metropolitan Theater. More passengers were picked up in the University district, making the full complement of 21 passengers under the efficient management of Mr. Aitken.

North Bend was called upon for 21 cups of coffee (well, all right, one wasn't coffee) . . . at Lake Ketchelus we were riding above the low-lying clouds spread out on the lake like so much unruly white cotton . . . and we saw quick flashes of men burning brush along the road and creating that nostalgic scent of woodsmoke and fall in the air . . . frost on the bare hills . . . someone wanting to sing "Sweet Adeline," but being stopped by the injunction that it should never be sung in the morning. After a stop on the summit near Snoqualmie, Mr. Aitken, in trying to coax all the passengers back into the bus, developed the technique of calling out, "Anyone who isn't here, shout!" It was a good system; we didn't lose anyone.

Arriving at Mason City Hotel with extreme accuracy at 3 p. m., we hurried into heavy shoes for the great moment of seeing the dam. But we didn't get to walk on it, we didn't get to touch it, we didn't even get close enough to it to have much comprehension of the size or the scale or the character of it. A dispirited announcer gave information obviously intended for tourists to take back to amaze their cousins in the town of East Overshoe, Indiana . . . speaking from view houses carefully placed so that, either in the morning or the afternoon, lectures were given at a time when the sun was near the horizon and directly in the looker's eyes. Perhaps they want to dazzle spectators, but one would have preferred that the dazzling be done by a closer sight of the dam instead of by the sun. However much one wanted to be on top of the dam, or even on top of a hill looking at the dam from above, it was not permitted. We saw a model of the dam completed, and another model in sections to demonstrate the great amount of excavation which had been done. We feel this should be called not a "trip over the dam," but a "lecture not far away from the dam."

At 6:30 p. m. everyone converged on the mess hall for the joint banquet, and it was wonderfully noisy. We did hear there had been a reception cum cheer in an upper room of the Mason City Hotel previously, but unfortunately missed that. At the banquet everyone had been long enough away from drafting boards as to have forgotten such mundane affairs, so that they sang with verve if not accuracy, and banged cheerfully on the thick glasses with knives. In fact, it was so pleasantly informal that Ted Jacobsen epitomized the spirit of it by remarking that as we could see, there was no speakers' table, and that anyone who could guess who the speakers were to be would receive a prize later. Dinner, centering around an endless supply of filet mignon, tender and brave with garlic, was remarkable for the great quantity of food served and for the delightful method of serving soup, milk and coffee in large enameled pitchers which one had to peer into to ascertain the contents.

After this noble dinner, Charles Pearson (the Tacoma architect with the inimitable wit) presided in Swedish fashion. President Glen Stanton of Portland then addressed the assembly at length, and introduced six other Portland men who spoke. Also, F. A. Naramore, Henry Bertelson, James Cole (of Gladding McBean), Erwin Weber (heating and ventilating engineer), and Charles Alden spoke. The principal talk was by Professor Dana of Washington State College, who presented the electric heating system as used in small houses at Grand Coulee, complete with diagrams and graphs of efficiency.

Having previously been promised there would be a dance in the gymnasium, many of us found that large, too slippery hall with the loud orchestra and danced as long as there was music . . . architects are surprisingly excellent dancers.

Afterwards, the dam drew many down again to look at it. It was strange the impatience that one felt for the opportunity to stroll damwards at all times of day and night, for always it looked different—at night with a magical evanescent quality, in the daytime with a dwarfed busy-ness that was fascinating.

Eventually one went to bed. The general report Sunday morning was that all beds were too short and all blankets too thin; however, those who stayed in cabins enjoyed them for the miniature flower gardens in front, the efficient electric heaters inside, and the smallness which prevented losing either equipment or roommate.

At Sunday breakfast, the Portland Chapter graciously acted as host to a fabulous meal served in the workmen's mess hall and consisting only of: oranges (dispensed from tubs), four varieties of cold cereal milk by the pitcherful, hot cereal, toast, platters of eggs, little pig sausages, good thick hotcakes, admirable strawberry jam, coffee, preserved figs, etc.

Next was a short meeting in the lounge of the Mason City Hotel, noticeable for the thickness of the smoke in the room, and for some excellent suggestions by Harold Whitehouse on the subject of domestic architecture and the young designer, and also for Mr. Jacobson's impatience to get the stone-quarry tour started. Glen Stanton spoke, too, at this session, as did Mr. Jacobberger.

There were so many camera fans on the trip that one was conspicuous without one. Returning home, again via chartered bus, by way of the Dry Falls, Vantage Ferry, movies of the busload and the scenery were taken by many observers and we were fortunate in finding on board both a fine tenor and an excellent soprano, so that there was considerable mass singing accompanied by a mouthorgan.

The impressions that remain are the immensity of the country near Grand Coulee, the clear cold air, the size of the hills, the cranes on the dam with lights even in the daytime, the power plant foundation with sections actually larger than basketball courts but seeming about 10 x 12, the constant insistent thin whistle of the shuttle trains signaling on the top of the dam, the amazing meals in the mess hall, the pleasure of seeing so many out-of-town friends and architects, the gay good humor of everyone, and the fine management of the sortie by those in charge.

SOUTHERN CALIFORNIA CHAPTER

Southern California Chapter held its annual election of officers December 12. The new officers are: S. B. Marston, president; Earl T. Heitschmidt, vice-president; Ben H. O'Connor, secretary; William H. Harrison, treasurer; Herbert J. Powell, director for the three-year term; Donald B. Kirby, director for the one-year term. Samuel E. Lunden is the hold-over director. Mr. Marston was president of the State Association of California Architects during the past year.

State Board of Architectural Examiners was the recipient of some good-natured ribbing by junior and associate members, who gave their version of the state board examining applicants for architects certificates. The skit was humorous from beginning to end and got a number of laughs from the spectators. Graham Latta, George Allison, Kemper Nomland and Eugene Pierce impersonated members of the examining board, and George Lind, Walter Reichardt, Paul Hunter and Douglas Honnold took the part of embryo architects.

Eugene Weston, Jr., presided at the meeting and introduced Robert Morrison, who recently transferred from the New Jersey Chapter to the Southern California Chapter. He also introduced Norman L. Lowe, Harry Wilson, "Bill" Eisen, Ken Johnson and Whitney Smith, guests.

Eugene M. Pierce, a new associate member, was introduced and presented with his certificate of membership.

ARCHITECT FOR BURLINGAME POST OFFICE

The jury's recommendations for awards in the regional competition for the design of a Post Office building at Burlingame, California, have been approved by Federal Works Administrator John M. Carmody.

The entry submitted by Ulysses Floyd Rible, 9397 Wilshire Boulevard, Beverly Hills, California, was recommended as the winning design. The new Federal building will be constructed by the Public Buildings Administration at an estimated cost of $150,000. The author of the winning design will receive a fee of $1,500. He will also receive an additional payment of $1,500 when he is called upon to act as consultant to the office of the supervising architect in the preparation of actual working drawings and specifications.

The jury also recommended Honorable Mention be awarded to: Harry M. Michelsen, 405 Montgomery Street, San Francisco; John Ekin Dinwiddie, 360 Pine Street, San Francisco, and Graham Latta, architect, Whitney R. Smith, associate, 113 East Los Feliz, Glendale, California.

One hundred and thirty-two designs were entered in the competition by architects residing in California, Nevada and Arizona, the states which comprise Region No. 11, in which the contest was held.

The jury of three architects drawn from near-by states to judge the designs were: Ellis F. Lawrence of Portland, Oregon; Burnham Hoyt of Denver, Colorado; Ralph H. Cameron of San Antonio, Texas.

Without knowledge of the names of the authors, the jury made the following statement in connection with the winning design:

"The jury was particularly impressed with the fact that almost without exception the designs submitted indicated a deep interest in the problem and a careful attempt within personal capabilities to present carefully studied and prepared submissions.

"The jury found itself in full accord in its search for designs that provided well lighted and coordinated work areas; direct solution of circulatory features; possibilities for sound construction; simple, frank and honest composition with a scale doing no violence to that of neighborhood structures and in character and keeping with government structures.

"It could but feel that as the purpose of this competition," the report continued," was to select a design and an advisory architect, only that design could be selected which showed its author capable of sound analysis, of artistic judgment and with respect for the integrity of architectural design. The design selected by the jury as the best of those submitted, it believes most nearly conforms to those standards."

The contest for the Burlingame Federal building is the fourth in the series of regional competitions sponsored by the Public Buildings Administration.

PASSING OF AMERICAN SLUMS

Proof that American slums are being eradicated by the low rent housing program of the United States Housing Authority is given by statistics which show that approximately 10,000 substandard structures had been eliminated in 26 cities up to last December 1.

In issuing the statistics, USHA Administrator Nathan Straus called to attention that they represent only 36 USHA-aided projects concerning which the local authorities have made formal reports on the progress of their slum clearance work.

A large additional number of substandard dwellings also have been eliminated throughout the country, he said, in connection with construction now under way on more than 125 low rent projects, but the data have not yet been officially reported and approved.

The United States Housing Act requires that substandard dwellings equivalent to the dwelling units provided by an USHA project must be demolished, effectively closed, or rendered safe and sanitary for human habitation.

A tabulation of this equivalent elimination of unsafe and insanitary dwellings which had actually been accomplished as of December 1, according to reports received from local authorities, shows:

Number of projects for which reports on equivalent elimination have been received and reviewed	36
Number of new dwellings to be provided in these projects	17,717
Number of slum dwellings which have been eliminated in connection wtih these projects	9,750
Percentage of necessary elimination for these projects which have been completed	55%

Commenting on these data, Mr. Straus said:

"These statistics are factual proof that the USHA program is progressing effectively to rid America of the disgrace and waste of slums.

"The figures, of course, do not yet tell the whole story even of the progress to date, for they are confined to formal reports from local authorities that have been received and reviewed by the USHA. They could be augmented by a large number of additional unsafe and insanitary dwellings in large and small communities throughout the country that actually have been eliminated to make way for USHA-aided projects now under construction but concerning which no formal reports have been reviewed."

In this connection, Mr. Straus pointed out that a total of 118,995 substandard structures will be eliminated under the United States Housing Act requirements in 140 communities by the construction of 310 USHA-aided projects for which loan contracts have been approved. These 310 projects are located in 29 states, the District of Columbia, the Territory of Hawaii and Puerto Rico.

SIMPLIFY RADIATION PROBLEMS

The National Bureau of Standards, Department of Commerce, has submitted to the radiator manufacturing industry and other interested parties, a simplification of sizes, dimensions and types of large tube, cast iron radiators.

The adoption of this recommendation would reduce the number of varieties of large tube radiator sections from 33 to 17, and, according to the Institute of Boiler and Radiator Manufacturers, would result in the elimination of those sizes for which there is no real need and very little demand.

The Institute proposed the recommendation to the Bureau of Standards only after a thorough study of the requirements of builders and home owners, and is of the opinion that its adoption will serve the best interests of all concerned.

It is believed that if the recommendation is followed, manufacturers will be able to concentrate on a minimum number of sizes, thus reducing production costs by eliminating many varieties in which the turnover is slow. In addition, maintenance of adequate inventories of recommended sizes will be faciliated, and the work of architects, engineers and contractors will be simplified in specifying, securing and installing radiation. The problems of distributors and jobbers will be eased by assurance of more prompt deliveries.

Mimeographed copies of the proposed recommendations may be obtained by applying to the Division of Simplified Practice, National Bureau of Standards, Department of Commerce, Washington, D. C.

CONTEMPORARY ART EXHIBIT

A show of contemporary art from the Bay Region collections will be held at the San Francisco Museum of Art January 14 to 21. It will include more than 200 oil paintings, watercolors, and pieces of sculpture, among them works by Carl Hofer, Pablo Picasso, Diego Rivera, Alexander Brook and many other leading modern artists. Also on view at the Museum is the exhibit of Tapa—The Bark Cloth of Polynesia. This exhibition will remain on view through January.

Walter Pach, eminent American author of outstanding books on art, will be the Museum's guest speaker on Thursday evening, January 25, at 8:30.

PORTLAND ARCHITECTURAL CLUB

Patron Wardner of the Oregon Chapter, A. I. A., reported at the last Chapter meeting formation of the new Atelier called Portland Architectural Club, with quarters at 217 Kraemer Building. Twenty-three men have applied and 18 paid dues of which 7 are Class C and 16 Class B. The class will study University of Oregon subjects without credits. First official criticism of a problem was given by Hollis Johnston.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

325. ACOUSTICS

Volume Six, Number Six of "The Quiet Forum," issued by The Celotex Corporation, is now at hand and has for its readers some very interesting data and information on acoustics. This little paper is illustrated and arranged as a regular magazine. The coupon below will bring a copy to you.

326. MINERAL WOOL

A folder entitled "Performance," put out by the National Mineral Wool Association, deals with the superior performance of mineral wool in stopping heat, cold, fire and sound. Plenty of information is contained in these pages.

327. WATER HEATERS

The Hotstream Heater Company have sent in advance notices of the issuance of their new catalogue which will be enlarged to 36 pages and will contain information on the complete line of water heaters manufactured by this company. Send for your copy by using the coupon.

328. SAFETY GLASS

An interesting folder has been received from Pittsburgh Plate Glass Company illustrating a new "Hi-Test Safety Glass," the main features of which are described in text with accompanying illustrations.

329. PAINT AND GLASS

The same company has also issued a booklet on the general products manufactured in their various plants with descriptive matter and pictures. Here one may learn about paint and glass and how these products are prepared for the market. Send for copies by using the coupon.

330. RUBBER BLOCKS

Rubber block paving, using rubber in the form of blocks or bricks, is described in a broadside put out by Goodyear Tire and Rubber Company. Here is a real departure from the usual floor covering. This broadside tells how an experimental 10x12-foot section was laid and how it reacted to constant usage.

331. DUTCH BOY

An old friend is welcomed back to the fold—the little Dutch Boy Magazine issued by National Lead Company. There is always information, news and data in this complete miniature publication: send for your copy.

332. SANYMETAL

The Sanymetal Products Company announce the issuance of their new Catalog Number 77. It appears to be a very handy and complete one, with details of this company's equipment, with drawings, illustrations and specifications.

333. SLIDING DOORS

A. J. Koll Planing Mill has put out a broadside to illustrate their new product, "Sav-A-Space Modern Sliding Doors" for installation in homes, apartments, offices, hotels and stores. The coupon will bring you a copy of this new innovation in doors.

334. TIN

The International Tin Research and Development Council have issued their Quarterly Review—a very well arranged and illustrated publication on tin, its uses and the technical questions involved in the manufacture and manifold uses of this important metal.

335. VENTILATION

American Machine and Metals, Inc., have a new folder descriptive of the DeBothezat Bifurcator, new and modern ventilating equipment. Complete tables and details are given. Use the coupon.

336. COOLING UNITS

Steam Jet-Vacuum Refrigeration Units are detailed and illustrated in a booklet issued by the Worthington Pump Company. This concern has put out some excellent literature describing its many and various pieces of building equipment.

337. ZINC PAINTS

A booklet, "Paint Progress," has been put out by New Jersey Zinc Company, dealing with zinc paints and their modern application in business and industry. Some interesting statistics are given in connection with the George Washington Bridge, on which this paint was used.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

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68 Post Street
San Francisco, Calif.

Please send me literature on the items as checked below. This places me under no obligation.

325 ☐	331
326 ☐	332
327 ☐	333
328 ☐	334
329 ☐	335
330 ☐	336
337 ☐	

My Name

Name of Company

Street

City State

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior of southern part of the state. Freight charge, at least, must be added in figuring entry work.

Bond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 per lin. ft.

Brick Veneer on frame buildings, $0.70 per sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

4x12x12 in. ..... $ 84.00 per M
6x12x12 in. ..... 94.50 per M
8x12x12 in. ..... 126.00 per M

HOLLOW BUILDING TILE (f.o.b. job)

Carload lots.

4x12x5½ ..... $ 94.50
6x12x5½ 73.50

Building Paper—

1 ply per 1000 ft. roll $3.50
2 ply per 1000 ft. roll 5.00
3 ply per 1000 ft. roll 6.25
Sisalkraft, 500 ft. roll 5.00
Bush cord com. No. 7 ..... $1.20 per 100 ft.
Bush cord com. No. 8 ..... 1.50 per 100 ft.
Bush cord spot No. 7 ..... 1.90 per 100 ft.
Bush cord spot No. 8 ..... 2.25 per 100 ft.
Bush weights cast iron, $50.00 ton.
Bills, $3.50 base.
Bush weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
Pea gravel	1.45	1.95
Mortar sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

SAND—

	Bunker	Delivered
Mortar sand	$1.40	$1.80
Oregonia Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Goldsburg plaster sand	$1.80 and	$2.20
Mt. Monte white	50c per	sack

CEMENT (all brands, cloth sacks) $2.72 per bbl. f.o.b. car.; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or delivered, 10c per sack. (Less 10c per sack returned, 2% cash Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery; over 100 sacks, $1.25; 2% discount 10th of month.

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c oer cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Fraoisco Warehouse.

Tricocel waterproofing.

(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yerd.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard meterial, such as rock will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with steirs, $115 instelled on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quentities, 16c per sq. ft. loid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	13/16x2¼" T&G	⅜x2" T&G	⅝x2" Sq.Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$133.50 M
Sel. Otd. Oak	118.00 M	101.00 M	106.50 M
Clr. Pla. Oak	120.00 M	102.00 M	107.50 M
Sel. Pla. Oak	113.00 M	92.00 M	99.50 M
Clr. Maple	124.00 M	105.00 M	

Wage—Floor layers, $10.00.

Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$36.00 per M
No. 2 common	29.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	26.00 per M
1x4 No. 2 flooring VG	60 00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	65.00 per M

Slash grain—

1x4 No. 2 flooring	$43.00 per M
1x4 No. 3 flooring	40.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.20 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded) 5/16" 3-ply and 48"x96"	$32.50 per M
"Plywell" (wallboard grade)— ¼" 3-ply 48"x96"	$38.50 per M
"Plyform" (concrete form grade)— ⅝" 5-ply 48"x96"	$110.00 per M
Exterior Plywood Siding— 7/16" 5-ply Fir	$ 90.00 per M
Redwood	$100.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $90.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1¾ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot

Rough and finish about 75c per sq. ft.

Labor—Rough carpentry warehouse heavy framing (average) $17.50 per M

For smaller work average $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work	per yard 42c
Three-coat work	per yard 60c
Cold water painting	per yard 10c
Whitewashing	per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.60
2 coats, lime mortar hard finish, wood lath	.70
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	1.10
Ceilings with ¾ hot roll channels metal lath plastered	1.85
Single partition ¾ channel lath 1 side (lath only)	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.80
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.10
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.40

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50

Wood lath, $7.50 to $8.00 per 1000.
2.5-lb. metal lath (dipped) .17
2.5-lb. metal lath (galvanized) .20
3.4-lb. metal lath (dipped) .22
3.4-lb. metal lath (galvanized) .28
¾-inch hat roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. werehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.50 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—
From $70.00 per fixture up, according to grade, quantity and runs.

Roofing—
"Standard" tar and gravel, $6.50 per sq. for 30 sqs. or over.
Less than 30 sqs. $7.00 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Copper, $16.50 to $18.00 per sq. in place
Cedar Shingles, $8.00 per sq. in place.
Re-coat, with Gravel, $3.50 per sq.
Asbestos Shingles, $15 to $25 per sq laid.
Slate, from $25.00 per sq., according to color and thickness.

Shakes—1x25" resawn	$11.50 per sq
½x25" resawn	10.50 per sq
½x25" tapered	10.00 per sq

Above prices are for shakes in place.

Sheet Metal—
Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)
Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural
$120 ton (erected), this quotation is average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—
$80.00 to $120.00 per ton, set.

Stone—
Granite, average, $6.50 cu. foot in place
Sandstone, average Blue, $4.00, Boise $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—
Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.— (See Dealers)
Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—
Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft
4 x 6 x 12	1.15 sq. ft
2 x 8 x 16	1.10 sq. ft
4 x 8 x 16	1.30 sq. ft

Venetian Blinds—
40c per square foot and up. Installation extra.

THE BUILDERS' EXCHANGE OF SAN FRANCISCO STANDARD WAGE SCALE

For mechanics employed on construction work in the Bay Region. Effective September 1, 1937

CRAFT	Journeymen Mechanics
Asbestos Workers	$ 8.00
Bricklayers (6h-5d)	10.50
Bricklayers' Hodcarriers (6h-5d)	6.75
Cabinet Workers (Outside) (5d)	8.00
Caisson Workers (Open)	6.40
Carpenters (8h-5d)	10.00
Cement Finishers (8h-5d)	10.00
Cork Insulation Workers (8h-5d)	9.00
Electric Workers (8h-5d)	11.00
Electrical Fixture Hangers	8.00
Elevator Constructors	10.40
Engineers, Portable & Hoisting	9.00
Glass Workers (8h-5d)	9.68
Hardwood Floormen	9.00
Housesmiths, Architectural Iron (Shop) (8h-5d)	9.00
Housesmiths, Architectural Iron (Outside) (8h-5d)	10.00
Housesmiths, Reinforced Concrete or Rodmen (8h-5d)	10.00
Iron Workers (Bridge and Structural) Including Engineers (8h-5d)	12.00
Laborers, Building (8h-5d)	$ 6.00
Laborers, Common (8h-5d)	6.00
Lathers, Channel Iron (6h-5d)	9.00
Lathers, All Others	9.00
Marble Setters (8h-5d)	10.50
Marble Setters' Helpers (8h-5d)	6.50
Millwrights	9.00
Model Makers ($1.50 per hr-6h)	9.00
Modelers ($2 per hr-6h)	12.00
Model Casters	7.20
Mosaic and Terrazzo Workers (Outside)	9.00
Painters (7h-5d)	8.75
Painters, Varnishers and Polishers (Outside)	8.75
Pile Drivers and Wharf Builders	9.00
File Drivers' Engineers	10.00
Plasterers (6h-5d)	10.00
Plasterers' Hodcarriers (6h-5d)	7.50
Plumbers (8h-5d)	11.00
Roofers, Composition (8h-5d)	9.00
Roofers, All Others (8h-5d)	8.00
Sheet Metal Workers (8h-5d)	10.00
Sprinkler Fitters	10.00
Steam Fitters (8h-5d)	$11.0
Stair Builders (8h-5d)	9.0
Stone Cutters, Soft and Granite (8h-5d)	8.0
Stone Setters, Soft and Granite	12.0
Stone Derrickmen	9.0
Tile Setters (8h-5d)	11.0
Tile Setters' Helpers (8h-5d)	6.5
Tile, Cork and Rubber (8h-5d)	9.0
Welders, Structural Steel Frame on Buildings	11.0
Welders, All Others on Buildings	9.0
Dump Truck Drivers, 2 yards or less	6.0
Dump Truck Drivers, 3 yards	6.5
Dump Truck Drivers, 4 yards	7.0
Dump Truck Drivers, 5 yards	7.0
Dump Truck Drivers, 6 yards	7.5
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	6.5
3 yards	7.0
4 yards	7.5
5 yards	7.5
6 yards	8.0

GENERAL WORKING CONDITIONS

1. Eight hours shall constitute a day's work for all crafts except as otherwise noted.
2. Plasterers' Hodcarriers, Bricklayers' Hodcarriers, Roofers' Laborers, and Engineers, Portable and Hoisting, shall start 15 minutes before other workmen, both at morning and at noon.
3. Five days, consisting of not more than eight hours a day, on Monday to Friday inclusive, shall constitute a week's work.
4. Transportation costs in excess of twenty-five cents each way shall be paid by the contractor.
5. Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturdays (except Laborers), Sundays and holidays, from 12 midnight of the preceding day, shall be paid double time.
6. On Saturday, Laborers shall be paid straight time for an eight-hour day.
7. Where two shifts are worked in any twenty-four hours, shift time shall be straight time. Where three shifts are worked, eight hour's pay shall be paid for seven hours on the second and third shifts, allowing one-half hour for lunch.
8. All work, except as noted in paragraph 9, shall be performed between the hours of 8 a.m. and 5 p.m.
9. In emergencies, or where premises cannot be vacated until the close of business, men then reporting for work shall work at straight time. Any work performed on such jobs after midnight shall be paid time and one-half up to four hours of overtime and double time thereafter, provided, that if a new crew is employed on Saturdays, Sundays or holidays which has not worked during the five preceding days such crew shall be paid time and one-half.
10. Recognized holidays to be: New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Christmas Day.
11. Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours' pay.

BOOK REVIEWS

SOME HISTORIC HOUSES: From the Records of The National Society of Colonial Dames; Macmillan Company, New York City, N. Y. Price: $4.00.

A book containing among its illustrations and in its text the bouquet of old port, the gleam of fine sheffield and Georgian silver, a flavor of the gracious living that once was a part of American life.

In these pages our fancy is caught by such names as the Carrolls of Maryland, Hopkins of Rhode Island, James Logans of Pennsylvania, the Van Courtlandts of New York and a host of others equally illustrious and famed for the beauty of their houses and of their appointments.

To the lover of fine furniture and graceful homes this book should find a ready welcome and a waiting place on the library shelf.

6 x 9 KRAFTILE USED IN FRESNO FIRE STATION

Detail of five-foot wainscoting of Kraftile 6x9's at doors of service rooms of Fresno fire department headquarters. The tile is stain-proof, acid proof and easily cleaned. The larger size of tile facilitates the wainscots design.

Kraftile was also specified for the equipment room of the Fresno headquarters. The wainscoting has a bullnose top course. Kraftile is considered ideal for such installations. Edward W. Peterson, architect; C. E. McMullen, tile contractor.

BONANZA INN: By Oscar Lewis; Alfred A. Knopf, New York City, N. Y. Price: $3.50.

Following on the heels of "The Big Four" which Oscar Lewis gave to the American nation, comes Bonanza Inn which he has really given to San Francisco first, California next and finally, to the country at large. It has been one of the ancient landmarks and here in this book the author has lifted a curtain and given to those of the later generations in a sweeping vista the reasons why this grand old hotel does have the place it has in the hearts of many.

In reading Bonanza Inn one is lost in the maze of glamour, glory, pathos, glint and tinsel, that made San Francisco and made the Palace Hotel. One enters the old palm court with General Grant, sees passing in and out such personages as Emperor Dom Pedro of Brazil, A. N. Towne, Alphonse Rothschild and a host of others that colored the town life of early San Francisco.

HOW TO BUY, SELL AND BURN COAL: By Thomas A. Marsh; 5625 Kenwood Ave., Chicago, Ill. Price $1.00.

An excellent little book containing a wealth of information on a subject of more than considerable moment. To those who find a daily use for coal in home, store or plant it will make a direct appeal. The chapters contain information on such topics as "How to stop smoke," "How to read fires," "How to increase efficiency," "How to shoot trouble on coal and stokers" and other valuable details.

AUTOMATIC DESIGN OF CONTINUOUS FRAMES IN STEEL AND REINFORCED CONCRETE: By L. E. Grinter, Ph. D., C. E.; The Macmillan Co., New York, N. Y. Price: $3.00.

Here is a complete new design procedure in a technical volume but written in as understandable a manner as one could ask. Great emphasis has been placed on the design of continuous frames in reinforced concrete. Almost ten years have been consumed in obtaining the acceptance of designers of the usefulness of the Cross Method of moment distribution. The concrete contractor, structural engineer and the architect whose work calls for a great deal of concrete and steel work will find in this book much valuable data.

MAGIC GARDENS: By Rosetta E. Clarkson; The Macmillan Company, New York, N. Y. Price: $3.00.

The author has made a life study and a hobby of herbs, seeds and savory seeds used as simples and condiments. She has written a delightful book in which there is a flavor of old world gardens and even the gardens of antiquity.

There are chapters on cosmetics, perfumes, distilling, drugs and even tobacco. This book is written for the gardener but not for him alone. The armchair Burbank and the armchair traveler will find here a book that will entrance them and bring a wealth of fascinating facts dressed for the occasion!

U. S. CENSUS OF BUILDING INDUSTRY IN PROGRESS

TWELVE thousand census takers have been in the field since January 2, calling on representatives of the Construction Industry—and all industries and trades throughout the United States—for their contributions to the Sixteenth Decennial Census. These first 12,000 will be followed in April with an additional 120,000 enumerators who will collect the balance of the information to go into this year's census, which will embody seven major compilations—the most extensive ever undertaken.

The census of construction activities will be conducted as part of the Census of Business. This canvass will also record the sales of all wholesalers and retailers, including those of distributors of building materials and lumber, and all service businesses.

The other six major compilations will be the Census of Manufactures, which will record the production and cost of production of all manufacturers, including the makers of building materials; the Census of Population; a Census of Housing, covering 35,000,000 dwellings, which will be taken for the first time this year in conjunction with the Population Census; the Census of Agriculture; Drainage and Irrigation; Mines and Quarries.

As the Construction Census has not been taken for four years, all those interested, directly or indirectly, in the developments of this industry will want the facts and figures it will make available. This census will record the activity of this industry last year, in each State and in each of the larger cities. It will summarize the reports of all general contractors and more than 25 different kinds of special trade contractors—those engaged in steel construction, foundation and excavation work, wrecking and demolition, air conditioning, roofing, decorating, plastering, plumbing, electrical and other work. It will include in its coverage all persons or firms engaged in construction for profit. One classification of the industry will include those who did a business last year amounting to less than $25,000. This inquiry will cover three kinds of builders—those who work on speculation, building houses for sale; investment builders, who build for rent; and occasional builders, who are not engaged in the industry continuously, and whose interest in this business is secondary.

The tabulations for those who did business amounting to more than $25,000 will include the value of contracts for heavy construction, such as water-power developments, dams, bridges, sewers, viaducts, tunnels, subways and foundations; for light construction—residential and other buildings in this class; and for highway work. One and two-family houses and other residential buildings will be given a separate listing from buildings "other than residential." Under each of these heads, new construction and additions will be listed separately from repairs and maintenance. Private work will be differentiated from public construction projects.

Itemized data will be presented on the cost, delivered on the job, of all materials furnished by contractors—brick, cement, steel and other materials—as well as equipment furnished and installed by contractors such as plumbing, heating and electrical apparatus. Also the sales value of all materials, equipment and merchandise sold, but not used or installed by contractors, will be shown.

The trend of employment and pay rolls in the industry will be reflected by a tabulation of employment totals for each month in the year.

All these data combined will provide the industry as well as producers and distributors of construction equipment and materials, with a general picture of the developments and trends of construction activities last year—information which can be used as a basis in determining future trends.

In addition to the information set forth in the Construction Census, there will be many items in the other censuses being compiled, which will be of interest to those engaged in this and allied industries. The Housing Census, for example, will reveal the characteristics of the nation's 35,000,000 dwelling units—their condition, age and need of major repairs, whether or not they are of wood construction, their market value and mortgage status, the amount of over-crowding within them, and the extent of modernization the older units have undergone. The Population Census will throw new light on suburban developments. By recording the address of each person in 1939 and five years ago, it will measure whether or not there is a tendency of people, during recent years, to make their homes in the suburbs. The Census of Agriculture will show the value of all buildings on the farms, and the expenditures in 1939 for building materials, including lumber, roofing, hardware, cement, paint and fencing materials. This census will also contain information on the kinds of roads on which the farms throughout the United States are located—whether they are hard surfaced, improved or unimproved dirt roads, gravel, shell or shale.

Since the value of the information being compiled will depend very largely upon its timeliness, the cooperation and quick response of those giving the answers to the questions asked is of the utmost importance to them as well as to the Census Bureau. It is their census, and they themselves can make possible its complete success by filling out as promptly as possible the Census questionnaires. With their full cooperation, it is anticipated that the work of collecting the information for industry and business will be completed by the end of May, and at least the basic information may be published by late summer or early fall.

The same law which requires reporting to the Census Bureau protects those questioned against disclosure of individual returns. All questionnaires used in taking the Census bear the following printed assurance:

(Turn to Foot of Next Column)

REDUCTION IN ARCHITECTS' FEES ON U. S. HOUSING PROJECTS

LOWER fees will be paid during 1940 to architects employed on projects aided by the United States Housing Authority. The cuts are accomplished by a sliding scale which lessens the percentage received by the architect as the size of the project increases.

Although declining to approve the reduced schedule, the American Institute of Architects will advise the architectural profession to accept the new fees for a period of one year.

The fact that sub-normal fees lead inevitably to unsatisfactory services is the principal reason the Institute is so concerned with the lowered fees now proposed by the Administrator. "Dangers are ahead for the housing program and the architectural profession if fees are established that do not permit the architects to render services of the highest quality and to earn fair profits," an official of the Institute said.

The schedule will be re-examined this year by Administrator Nathan Straus and officials of the Institute to determine whether any of the fees are unfair either to the public or to the architectural profession. This arrangement has been reached following conferences between a committee of the Institute and Mr. Straus.

On projects costing $200,000 the architect will receive $7,640 or 3.82 per cent in contrast with the existing fee of $8,000 or 4 per cent. On $1,000,000 projects the revised fee is $35,000 or 3.50 per cent as against the existing fee of $37,500 or 3.75 per cent. On $5,000,000 projects the revised fee is $90,500 or 1.81 per cent as against the existing fee of $105,000 or 2.10 per cent. On $10,000,000 projects the fee has been reduced from $170,000 to $150,000 or from 1.70 per cent to 1.50 per cent.

"Making reductions by a sliding scale indicates a belief that responsibilities do not increase as projects grow larger, and tends to level off to common amounts the money that can be earned by architects on housing projects."

The leveling off idea has been encountered in many phases during the last few years, but the Institute has not endorsed a philosophy which seems so deadly to the development of the initiative and practice of the individual.

Professional fees are not based on costs of service only, for such costs do not reflect the value of the advice and counsel rendered. Such costs are fundamental, however, to any study of fees, and every architect should furnish them promptly and without question, in his own interest, the Institute spokesman pointed out.

"Architects' costs on housing projects fall into the same category as do their costs on any normal building operation," he continued. First, costs incurred prior to the execution of their architectural contracts, which the Institute calls development costs. Second, costs incurred subsequent to the execution of their architectural contracts and continuing until their working drawings, specifications, and contract documents are completed, which the Institute calls production costs. Third, costs incurred during the construction and completion of a project, which the Institute calls administration costs.

"The representatives of the Authority on the other hand, have stated that whatever is left of the architect's fees after he has paid his draftsmen and ordinary office expenses, should be only enough to permit him to have a good living, which would seem to mean that architects are not to be permitted to earn enough to protect their practices, charge any of their own time as costs of their practices, or to earn any profits.

"It is inevitable that any schedule of fees which does not permit a professional practitioner to earn an adequate dividend or net return on his practice must lead him to lower the quality and adequacy of the services he renders, in his attempt to avoid a financial loss. He should not be forced to that choice.

"Inferior and inadequate architectural services inevitably will follow lowering of fees below the amounts the architects have found necessary to enable them to give first-class services and earn adequate livings.

"The Institute believes and has repeatedly declared that adequate and proper housing for the low income groups must be produced at the lowest possible cost consistent with good design, good construction, and the proper placement of the project.

"It believes that every such project should be examined to determine whether or not there are present in it excessive costs due to governmental regulations, procedures, or operations or to inflated realty values or to excessive costs of labor or unfair trade or other practices; or to excessive fees accruing to any professional or other group; or to excessive profits made by any contractor or producer of materials, in connection with the project."

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ENGINEERS ELECT NEW PRESIDENT

At the annual meeting of the San Francisco Section of the American Society of Civil Engineers, Harold B. Hammill was elected President, to succeed Frederick H. Fowler.

Mr. Hammill has been practicing civil engineering in San Francisco for the past 30 years and is well known in his profession.

James I. Ballard was elected First Vice-President and T. J. Corwin, Jr. was re-elected Secretary-Treasurer.

EDWARD LANGLEY SCHOLARSHIPS

Until March 1, 1940 the American Institute of Architects will receive proposals of candidates for Edward Langley scholarships for the year 1940.

Awards will be announced about June 1.

Awards may be made to residents of the United States or Canada.

These scholarships are awarded annually for advanced work in architecture, for study, travel, or research, as the holder of the scholarship elects. Awards to undergraduates are precluded, but awards may be made to architectural draftsmen who desire to do undergraduate work or take special courses in architectural schools. An award in a succeeding year to a holder of a scholarship is not precluded.

Competitive examinations will not be used as a method of selection.

The scholarships are open to all persons engaged in the profession of architecture. To facilitate making the awards, such persons are grouped as follows:

Group 1

(a) Architects in active practice;

(b) Architectural draftsmen employed by architects, whether the draftsmen are engaged in drafting, writing specifications, supervising or acting as executives, and whether or not they are college graduates.

Group 2

(a) Teachers in schools of architecture;

(b) Students about to graduate from such schools;

(c) Graduate students of such schools who are engaged in post-graduate work either in college or in travel.

The awards will be made and the grants determined by a committee of the board of directors of the Institute. In making awards, all candidates from both groups will be considered as a single group by the committee, and scholarships will be awarded to those who, in the judgment of the committee, are best qualified therefore by reason of character, ability, purpose, and need, regardless of place of residence or whether they are Group 1 or Group 2 candidates. The amount of grant with each scholarship will be determined in accordance with the need and purpose of the candidate and the funds that are available. Only a very limited number of awards can be made in any year, so, to avoid unnecessary disappointment, a candidate should not be proposed unless his qualifications are

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outstanding and it is evident the profession will be benefited by an award to him.

HOW TO PROPOSE CANDIDATES

Group 1 (Office) Candidates

Proposers. Any architect in the United States or Canada may propose any other architect or architectural draftsman residing in the same country as a candidate for an award in Group 1.

Form of Proposal. Every proposal of a candidate in Group 1 shall be made in duplicate on A.I.A. Form S70, which may be obtained from The American Institute of Architects, 1741 New York Avenue, Washington, D. C.

Filing Proposals. All information and data required shall be filled in on the proposal form, and both the original and duplicate proposal shall be sent to The Secretary, The American Institute of Architects, at the address given here, so as to reach there not later than March 1, 1940. Proposals received after that date cannot be considered.

A proposed candidate may be requested to submit examples of his work and to appear before a representative of the committee.

Group 2 (School) Candidates

Proposers. The faculty or head of any architectural school in the United States that is a member of the Association of Collegiate Schools of Architecture, or the faculty or head of any architectural school in Canada whose standing is satisfactory to The Secretary of The American Institute of Architects, may propose any teacher in such school, any student about to be graduated from the school, or any graduate student engaged in post-graduate work in the school or in travel, as a candidate for an award in Group 2.

Form of Proposal. Every proposal for a candidate in Group 2 shall be made in duplicate on A.I.A. Form S70a, which may be obtained from The American Institute of Architects, 1741 New York Avenue, Washington, D. C.

Filing Proposals. All information and data required shall be filled in on the proposal form, and both the original and duplicate proposal shall be sent to the Secretary, American Institute of Architects, at the address given herein, so as to reach there not later than March 1, 1940.

OREGON CHAPTER NOTES

At the November meeting Secretary Roi Morin gave a short but interesting review of his visit to the Washington convention and his observations of architectural progress in Vancouver, Montreal, Boston and San Francisco.

Chapter dues this year will be $5.00 instead of $3.00, except for junior members, which will remain as heretofore.

Wallace Hayden of the U. of O. Architectural Department gave a lucid, entertaining and highly instructive talk on his recent European tour.

Regional Director Robert K. Fuller of Denver is scheduled to be in Portland, Tuesday, January 23rd. When the annual Chapter dinner will be held.

President Stanton entertained 25 of the Chapter members at his home following adjournment of the November 21 meeting.

EXHIBIT BUILDING AT BOULDER DAM

Plans have been completed for the construction of an exhibit building for the convenience of visitors who go each year to Boulder Dam.

The building, which will probably be ready for use

by next July, will contain rest rooms, a room for use by the guides stationed at the dam, and a hall to contain a model of the Boulder Canyon. It will be situated on the Nevada side of the Colorado River near the abutment of the dam against the precipitous wall of Black Canyon. The building will be air conditioned for the comfort of the many thousands who visit the dam during the summer months.

Regular tours through Boulder Dam are conducted by the Bureau of Reclamation and the exhibit house will be an added feature of the tour. The model will show the relationship of Boulder Dam to other features of the development of the Colorado River, such as Parker Dam, the Colorado River Aqueduct, Imperial Dam, and the All-American Canal. The operations of this system of works also will be illustrated by the model. Power lines and rods will be shown.

Since the completion of Boulder Dam in 1935 the number of visitors at the structure has increased from about 300,000 the first year to a maximum of 600,000.

NEW SLIDING DOOR

A new sliding door that can be installed in a 4-inch wall, built to sell in the same price range as ordinary doors, has been perfected by A. J. Koll Planing Mill of Los Angeles. The door is sold under the brand name "Sav-A-Space."

With a unique design incorporating noiseless roller-ball bearing hangers in a circular header track, the sliding door can be fitted into an ordinary 2"x4" partition, instead of the usual double wall. The hardware is so designed that the door may be raised slightly and slid from its hangers in a few seconds.

In the course of perfecting the door, the manufacturers made supervised tests with a door of over twice average weight, moving it over 100,000 complete cycles on a 38" track. Inspection revealed no perceptible wear.

The "Sav-A-Space" Line includes double-sliding doors, as well as sizes for all standard door openings.

AIR CONDITIONING EXPOSITION

The Sixth International Heating and Ventilating Exposition will open at Lakeside Hall, Cleveland, Ohio, Monday, January 22, with exhibits of equipment by more than 300 leading manufacturers. This show, otherwise known as the Air Conditioning Exposition, will be held during the week of January 22 to 26. The first exposition was held in Cleveland in 1932 and its other biennial appearances have included Philadelphia, Chicago and New York.

PAN-AMERICAN CONGRESS

The Fifth Pan-American Congress of Architects will be held March 4 to 9, in Montevideo, Uruguay, under the patronage of the President of the Republic of Uruguay—Don Alfredo Baldomir, a distinguished architect—and under the auspices of the Ministers of Foreign Affairs, Education, and Public Works.

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UNIQUE SCHOOL OF DESIGN

The School of Design, unique Chicago art school whose students find the road to art, science and technology at one and the same time, will begin its spring semester February 12. Courses lead to a designer's diploma after four years and an architect's degree after six years. The curriculum is patterned largely after that of the Bauhaus, world famed art university where Prof. Moholy was a member of the faculty.

The student, upon entering, finds himself in a combination of workshop, studio, laboratory and classroom, and gives part of his attention, as he progresses, to basic tools and machines of crafts and industry as well as to modeling, drawing and color work, photography, and lettering—taking part at the same time in science courses covering physical, life and social sciences.

In this first year he is not permitted to confine himself to any specialized activity until he has experienced them all in their fundamentals and has gathered up to date information about them. He then knows the special problems and pleasures of each and the part they play in the world about him.

This type of education will not only lead to a designer's career but will be the best antidote for the shallow entreaties and manipulations of the demagog as well. Thus the student can judge more effectively where he best fits for better service in the community.

Beginning his second year he may set out along his chosen path, by entering one of the special workshops. These are for product design in wood, metal, glass, plastics; the light workshop including photography, motion picture, typography, advertising arts; the weaving workshop; the color and sculpture workshops.

The two additional years for the architect's degree are planned so that the graduate designer can complete the work in architecture without interruption.

Simultaneously with the day classes, the School of Design conducts evening classes and a Saturday morning children's class.

RUNNING FIRE

(Concluded from Page 1)

Catholic Church adopted the paganistic practice of having a festival and honored seven saints on that day. The Church of England has a feast. America drinks. The British Isles have Wass hael bowls, hot pints, loving cups and first-foots. In all, New Year's eve is a mental and moral excuse to relax, forget and imbibe.

"The Romans believe that their god of doors, Janus, was opening a door to an untouched room on January first and that everyone should celebrate the occasion in anticipation of a happy future. This is the attitude of people in this country and others, though, like the Chinese and the Hebrews, they don't necessarily have to have New Year's on January first. However, the true significance of New Year's is that it is a memorandum of the subtraction of another year from the little sum of life, and it is my conviction that all the drinking of egg-noggs, Tom and Jerrys, mulled wine and Old Fashioned is really a means of making man realize next morning that he has one year less to go."

The Little Man finished his alka-seltzer, glared at me again and ordered a highball from the bartender.

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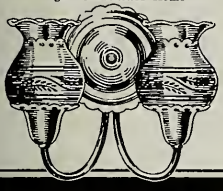

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The steadily increasing number of students has necessitated enlarging the faculty, Prof. Moholy announces, so the Chicago School Board has appointed besides the guest lecturers from the University of Chicago, Professors Eckart, Gerard and Morris for the sciences, Dr. A. A. Sayvetz for the Mathematics courses. George Fred Keck heads the department of Architecture with the assistance of Jan J. Reiner and Robert Bruce Tague.

FEDERAL REGULATION OF BUSINESS

A referendum report asking an expression of the views of business organizations on government regulation of business, especially with reference to the anti-trust laws, has been mailed to its members by the Chamber of Commerce of the United States.

The report, prepared by a special committee of the Chamber, puts forward six specific propositions on which members are asked to vote yes or no. Under the Chamber's procedure, forty-five days are allowed for a referendum ballot, only member organi-

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zations voting. Individual firms and corporations within the Chamber's membership express their views through their organizations.

Here are the questions to be voted upon:

Any proposals having for their object the control of industries by governmental agencies should be opposed.

The patent system should be maintained without impairment, including freedom of patentees to grant licenses restricted as to use.

Existing remedies under the anti-trust laws are ample and can and should be enforced in an orderly manner.

Proposals for addition of more civil remedies to the anti-trust laws should be opposed.

Extension of section 7 of the Clayton Act to give the Federal Trade Commission authority as to acquisition of assets by corporations should be opposed.

Such rights as the anti-trust laws now contain to permit reasonable arrangements should be preserved.

To give the membership the fullest information on the subject on which they are asked to vote, the Chamber's procedure requires that the pamphlet contain not only the committee report, but also the major arguments against the committee's recommendations. These negative arguments are prepared by direction of the Board of Directors, and in this instance include arguments of the Temporary National Economic Committee, with which the Chamber's committee disagrees.

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THE OUTLOOK

By E. R. STETTINIUS, JR.
Chairman of the Board
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In entering upon the New Year it must be borne in mind that there are many uncertainties and many difficulties yet to be solved before a sound basis for sustained progress can be realized. The future course of American business depends, to a large extent, upon the solution of our domestic problems. Industry can prosper only when a feeling of confidence permits the full utilization of our great resources, thus putting back to work both idle capital and idle men. The business future should also be measured in terms of the uncertainty which surrounds the termination of world-wide conflict, particularly in Europe. No healthful or sustained prosperity can be predicted on industrial stimulation which in considerable measure is temporarily inspired by war demands.

All responsible members of American industry earnestly pray for an early peace upon a permanent basis, as well as for a solution of the many problems on the home front.

NAIRN MODES AND METHODS SHOW

While the location is to be announced later, a ten day period, February 12 to 23, has been scheduled for presentation of the Nairn Modes and Methods Show in Los Angeles. This elaborate traveling exhibit has already been demonstrated to architects, contractors, decorators, realtors, distributors and dealers in 19 Eastern cities, and following Los Angeles, will visit San Francisco for eight days starting February 27th, then on to Portland, Seattle, Spokane, Salt Lake City and Denver.

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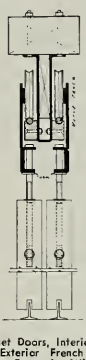

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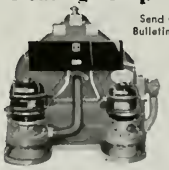

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strations by representatives of Congoleum-Nairn.

A special Nairn Modes and Methods Show, demonstrating the latest developments in the manufacture and application of various types of linoleum, will be given for architects and associates on a date to be announced during the ten day stay in Los Angeles.

SCULPTURE COMPETITION

The Section of Fine Arts of the Public Buildings Administration of the Federal Works Agency invites competition for two sculpture reliefs to be carved in limestone on the North facade of the Federal Office Building, New Orleans, Louisiana.

Further details may be obtained at the San Francisco Museum of Art.

ARCHITECTS & NATIONAL AFFILIATION

(Concluded from Page 12)

to suit individual cases and circumstances, is almost universally adopted throughout the country. The policy of the government in utilizing the services of private architects in certain classes of government work was adopted as a result of the activities of the Institute, another instance of benefit to architects in general.

At present the affiliation movement has progressed to the point where many state associations and societies have affiliated with the Institute and have a voice in its deliberations without in any way sacrificing their identity or their local activities or jurisdiction. It is expected that the Institute will shortly adopt measures enabling state organizations to adapt their business and ethical standards to those of the Institute, subject to certain minor conditions, preparing them to assume a relationship to the Institute parallel to that of the Chapters, yet without sacrificing their name, identity, or complete autonomy. When all come within this relationship, it may be considered that not only has general affiliation been established, but "unification of the architectural profession" accomplished as well. Architects then will be better known as a real influence in society and the building industry, and will be in a better position to accomplish more for themselves individually.

With these thoughts in mind, architects throughout the country are urged to join existing state societies or associations, or, where such do not exist, to form new ones. Existing organizations are urged to seriously consider the necessary simple steps by which to secure affiliation with the national organization of the architectural profession. —Victor A. Matteson in Monthly Bulletin, Illinois Society of Architects.

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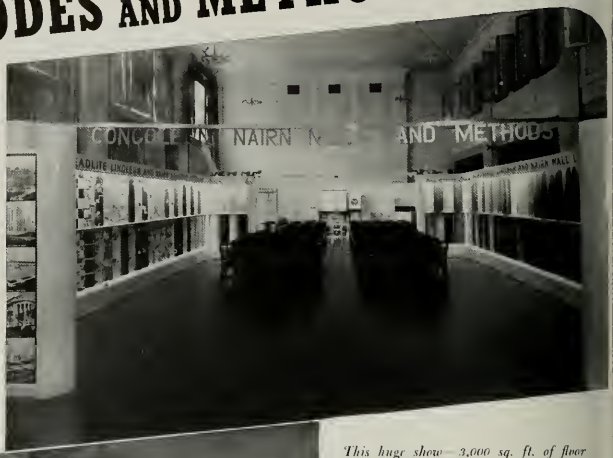
ARCHITECT AND ENGINEER

WORK OF HENRY CARLTON NEWTON, A. I. A., ARCHITECT AND J. EARL TRUDEAU, ASSOCIATE

NAIRN MODES AND METHODS SHOW

ARRIVES ON THE WEST COAST



This huge show—3,000 sq. ft. of floor space—will give you many ideas on the modern use of linoleum and its proper installation.

(Below) Proper installation methods are demonstrated in these "evolution" displays, and a motion picture showing the technique.

(Above) Life-size room settings show the beautiful effects possible with Nairn Linoleum for floors and Nairn Wall Linoleum.

A DRAMATIC, educational exhibit of the most modern trends in linoleum, and its use on floors and walls in various types of construction. The Nairn Modes and Methods Show is something every architect should see.

1,563 leading architects attended showings of the Nairn Modes and Methods Show during 1939 in Eastern and Middle Western states.

Improved by architectural suggestion, this show is appearing in the major cities of the West this year.

You are cordially invited to attend. You will be informed of places and dates of showing through this publication and through written invitation.

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In San Francisco: Western Furniture Exchange and Merchandise Mart

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LINOLEUM

Floors and Walls

RUNNING FIRE

by MARK DANIELS, A.I.A.

The Peace of Indifference

In 1918 it was propaganda that won the war. Some say it was our doughboys. Others say the British had something to do with it. I say propaganda did the job.

In the present state of affairs practically all nations of the world are holding down the bourdon of propaganda with both feet. The result is that the eagle is being shot with its own feather. Claims and counter-claims bombard our eyes and ears until we of the people are in a daze of doubt and wonderment. Our prayer is for peace and it is likely that we will attain it independently of all belligerents. If these campaigns of propaganda continue we may have peace any day now—the peace of indifference.

★ ★ ★

The Penalty of Ability

Roy Fowler, the able and versatile City Engineer for Santa Cruz, is beginning to pay the usual penalty for ability, understanding and consideration for others. The good citizens go to him for advice and help in any emergency that can be remotely associated with engineering. If there is a landslide in the district they pray earnestly for a let up of the storm, then rise and telephone Mr. Fowler.

This winter has developed a new angle. With the heavy rains came wet streets and short periods of rain-filled gutters. It was natural for the mothers of Santa Cruz to ask Roy to do something about it but they also wanted to know how to keep the children from sailing boats in the gutters and what to do to cure their colds. I have just mailed a copy of "The Care of the Child" to Roy as an addition to his engineering library.

★ ★ ★

No Dice

In the days of ink tracings an up and coming line pen salesman had what he thought was a hot idea. With permission of the chief draughtsman he stepped into a large draughting room and asked the score of men to hold aloft the instrument they used most. Each and every draughtsman in the room held up an eraser.

I, too, thought I had a good idea. I would ask a number of architects what they found to be the most difficult problem in their profession. I would then write an enlightening article on this most important phase for the guidance of the budding genius.

Nine architects were questioned. To each I propounded the question, "What is the most difficult problem that confronts you in your practice?" Each of the nine replied, "How to get a job."

★ ★ ★

The Wetter the Weather

I hate rain. In the country it is a beautiful phenomena that brings life to the earth, but when it rains in San Francisco I look with envy on the inhabitants of bombed Helsinki and Viipuri and the harassed soldiers of the Maginot line.

In the first place, rain brings umbrellas, galoshes, rubbers and slippery sidewalk lights. After I have donned my overly warm rubbers, and skidded six feet on a row of sidewalk lights, I invariably find myself being charged by at least three women, heads bent down, transparent umbrellas before them and a myriad of spikes aimed at my eyes and midsection. At this point I yell, and all three heads pop up, look through their transparent umbrellas for the first time, and come to an insulted halt.

The most ferocious sight on the street, though, are the large black umbrellas carried by men. These have long stays, are a foot deep and cover a large portion of the sidewalk—in fact, they are canopies. But they are safe. The man beneath merely holds the protecting cover above his head, has clear vision and remains dry—he does not charge anybody. But women, with little, transparent umbrellas, never bother to look through their protection, but merely use it as a battering ram and effectively pass through traffic. One just charged me—I dodged, slipped, fell and bruised my back. I hate rain.

★ ★ ★

Refutation

I had just sat down at the bar and with upraised hand was signalling the bartender when the Little Man said, "Don't mind if I do!" and sat down next to me. The bartender brought both drinks and I paid for them, whereat the Little Man said "There are more isn'ts than ises. I read your article and it was a poor interpretation of irrelevant facts."

I started to apologize but the Little Man continued. "All mental impressions are impressions; their texts are not physical. The same applies to movies, books, legends, songs, fables, and the radio. Momus jested for Jove, and Hebe brought him wine. Was the wine, the jester, the cup-bearer or the drinker an is? No. An infinitude of isn'ts arrive with every printed line, oration or word of conversation. If there were more ises than isn'ts this would be a factual world and Jove would have come from Missouri. The Greeks lived in an immortal, imaginary world and produced great works—Homer wrote, Socrates orated and drank hemlock—Jove smiled and Athens was built—the Sybil whispered and the Acropolis lives today—Mars laughed and Alexander conquered worlds. The blue Mediterranean was a playground where Neptune ruled, where Ulysses adventured and across which the might of Ajax traveled to bring love to Helen and Paris.

"Today we move in liners, storm signals are posted and the might of Neptune, the anger of Jove and the wrath of Apollo are known before they can hurt. Our world is becoming an is world. If it weren't we would have more of Venus de Milo, of Titian, of Herodotus, of Byron. But so long as we remember the Iliad, Charlemagne, King Arthur and Popeye we shall have beauty, and as long as we have beauty and dreams, this is a world of isn'ts."

The Little Man mumbled something else and trotted out the door hurriedly. My glass was empty and I had tasted nothing.

APPRECIATION

Editor, Architect & Engineer,

The January issue of your magazine was to me one of the most gratifying experiences of my career, and I should like to thank you for the good thought and for the excellent way in which the material was presented. MARIO CORBETT, Architect.

ARCHITECT AND ENGINEER

FEBRUARY, 1940

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Roof has a partial ceiling of Weatherw
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comprising steel sash and pressed cop
roof panels. The functional horizontal e
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This was followed by the industry revolutionizing Bildrite Sheathing, a sheathing which tests prove gives four times the bracing strength of wood sheathing laid horizontally.

And Bildrite Sheathing is so integrally waterproofed with asphalt that it allows lower temperatures on the outside to draw out the last vestige of vapor.

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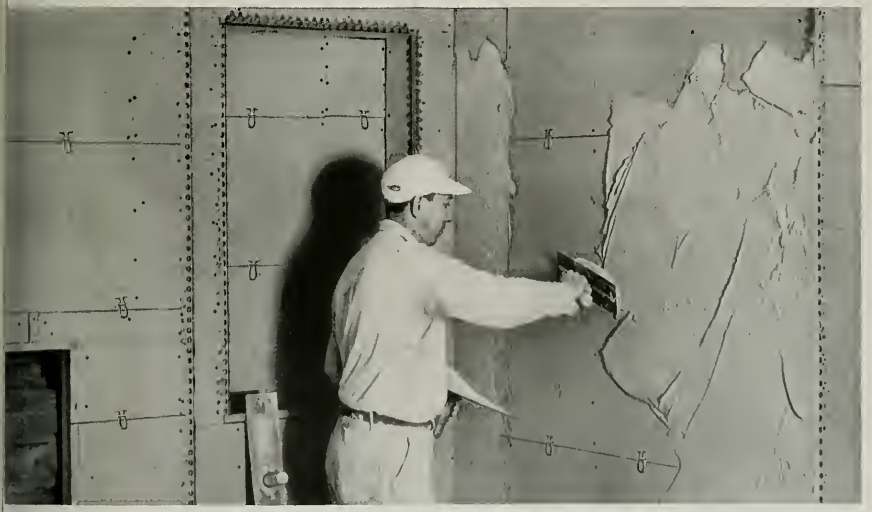

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DETAIL OF 15 FT. MAIN ENTRANCE TO HARRIS HALL OF ARCHITECTURE AND FINE ARTS, U. S. C., LOS ANGELES.

WITH Frank Lloyd Wright, internationally known architect, as one of the speakers, the new Harris Hall of Architecture at the University of Southern California, was dedicated in a series of afternoon and evening programs January 18th to the 20th. Other notables who spoke were Dr. Chas. F. Kelley, assistant director of the Chicago Art Institute; Dr. Edgar L. Hewett, director of the State Museum of New Mexico; Walter Baermann, director of the California Graduate School of Design; Arthur Miller, art critic, and Sylvanus B. Marston, architect of Los Angeles.

Headed by Dean Arthur C. Weatherhead, the 17 faculty members of the Trojan College of Architecture and Fine Arts, also participated in the different programs. Subjects discussed included creative design, arts of the Pacific area and contemporary architecture.

Some 2000 students attended the simple ceremonies that marked the dedicatory exercises in Bovard Auditorium the afternoon of January 18.

Interest of the Southern California architects centered in the evening program which offered for its main attraction the eminent speaker and distinguished architect, Frank Lloyd Wright.

Original in thought and word, blunt and at times caustic, Mr. Wright is credited with introducing "The American Expression in Architecture" to this country and Europe. Author, lecturer, and craftsman who makes new uses of engineering principles in combination with modern architecture, Wright is reported to have been first to make use of the "sealed" office building with air-conditioning and interior lighting.

Some Wright maxims:

"Architecture lies where it fell 500 years ago because of our own simple mindedness. Our educational processes have been childlike."

"Architecture is more than mortar, bricks, and blueprints. It is that sense and practice of structure which so intrigued Beethoven and Bach."

"It is that something born in human life for human life; built on patterns of understanding."

"The coming generation of architects will give America what it wants."

"Cities are dead. They have sucked out of us what little we have left."

Harris Hall is destined to become a new art center for Southern California art lovers as well as University students.

Californian in theme, with its five wings centering around three large outdoor patios, Harris Hall extends a block in depth from Exposition Boulevard. Special equipment provides for the college's 76 courses in fields of architecture, ceramics, sculpture, design, jewelry, and painting. An auditorium seats 225 persons.

Serving as a top border to the main building is a mural-type fresco by Barse Miller. Done in red and grey brick to blend with the concrete and brick of the outside walls, the fresco depicts the history of culture in civilization. The running story is 185 feet in length, beginning with the symbol of God releasing "conscience" to represent culture and climaxed over the 15-foot doorway by figures representing science and industry.

Termed as "painted music," the fresco is done in equal rhythmic measures. Each is controlled every eighteen feet by a pause as in a musical bar. Its technique permits the reading of either the figures or the spaces between.

Following the theme from small sketches, Artist Miller laid out the figures, which are more than life-size, on muslin and then applied the coloring for the correct effect.

(Turn to Page 10)

PATIO, LOOKING TOWARD EAST WALL, HARRIS HALL, R. C. FLEWELLING, ARCHITECT

Your Clients, Too, are Reading About "A Better Way to Build!"

George S. Hawes, architect, of Flint, Michigan, planned this delightful small home for Dr. Ryan of that city. Stone, brick, and wood siding are used, with Celotex Vapor-Seal Sheathing serving equally well with all three materials.

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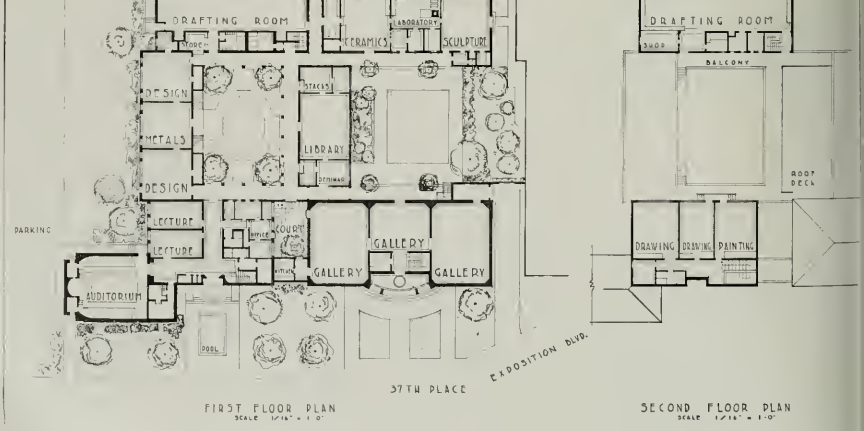
When applying the finished design it was necessary to work with color on wet mortar to a thumb-print dryness. During warm days, Miller and his assistants began at 3 a.m. in order to obtain the proper sealing of the paint.

Mr. Miller is nationally known for many prize-winning awards, notably the Dana Gold Medal of the Pennsylvania Academy of Fine Arts, and many museum and state fair exhibits over the country including those of San Francisco and New York. His painting at the Texas Centennial Exposition was purchased by Henry Ford for his Dearborn gallery. Mr. Miller's frescoes are seen in the Furnace Creek Inn, the Southern California Edison Building and in numerous high schools.



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On this Portland, Oregon, home, 5/16" Plyscord was used as wall sheathing, 3/8" as roof sheathing and 5/8" as sub-flooring. (The 5/8" Plyscord was used first as concrete form material.) This house is 40% more rigid than if diagonal board sheathing had been used. Cutting, fitting and nailing were minimized. The 5/8" Plyscord sub-floor, for example, went down in just half the usual time. Richard Sundeleaf was the architect.

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ouglas Fir Plywood wallboard (Plyall) with 2 coats of asphalt paint on e back, or with glossy-surfaced, asphaltpregnated building paper weighing 50 s. per roll of 500 sq. ft. between the lywall and studding forms a vapor barer 7 to 10 times as effective as some aterials which are claimed to act as eals" against vapor. See test data below. lywood is such an efficient barrier beuse asphalt paint on its smooth surface ecomes an unbroken film. *(Note: lways place vapor barriers on inside walls, ot outside walls.)*

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HERE'S ACTUAL DATA

Comparisons shown below are taken from actual Government reports)

Plywood WITH 2 COATS OF ASPHALT PAINT

ONLY 3 DROPS OF WATER — MOIST AIR

Insulation Fibre Board

185 TO 240 DROPS OF WATER — MOIST AIR

Lath and Plaster

79 DROPS OF WATER — MOIST AIR

FHA has accepted Douglas Fir Plywood for home construction, and its use is approved in Uniform Building Code

Comparative Resistance of Various Materials to Vapor Transmission
(From Tests at U. S. Forest Products Laboratory)
NOTE: The lower the figure, the more effective the vapor barrier.

Material	Loss in grains per sq. ft. per hour
Plywood, 1/4-in. Douglas fir, 2 coats asphalt paint	0.308
Plywood, 1/2-in. Douglas fir, 5-ply	1.920 to 1.975
Plywood, 1/4-in. Douglas fir, soybean glue, plain	3.080 to 4.620
Insulating Sheathing, surface coated (asphalt both sides and aluminum paint on one side)	2.190 to 3.050
Plaster-Wood lath	7.900
Insulated lath and sheathing-board type (1/2 and 3/4 in.)	18.50 to 24.65
Plaster, fibreboard or gypsum lath	14.20 to 14.80

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GARDEN BEAUTY IN THE SPRING

By Berniece Ashdown, Landscape Architect

SPRING is wildly extravagant. Lavishly she spreads beauty over the earth that conservative winter has made dormant. In every fold of rich warm earth, there is her urge to grow.

Gardeners with a sense of thrift must begin soon to utilize this energy. From early January in California and later in other places, depending upon the climate, judicious planting will bring hundreds of blossoms to herald the awakening of spring. Most early flowers should be planted in the fall, so that their roots will have a chance to establish themselves.

Bulbs for spring gardens include: Crocus, Grape Hyacinth (Muscari), Glory of the Snow (Chionodoxa), Snowdrop (Galanthus), Winter Aconite (Eranthis hyemalis), and Scilla. They are extremely adaptable and serve generously in a multitude of locations. They can be naturalized by planting in broad informal sweeps at the edge of light woodland or in grass. Many small bulbs make splendid ground covers, beneath shrubs and taller growing bulbs. The nooks and corners of the rock garden are favorite places for these aggressive little vanguards of spring. Crocuses do well if planted in the lawn. All small bulbs should be planted two or three inches apart; they must have good drainage.

Hyacinths are lovely in the spring garden. They come in shades of blue, pink, yellow and white. Their heavy fragrance literally fills the air when they are in bloom. They are quite agreeable too, if they are humored a little. Like other soring bulbs, they should be planted in the fall, six inches deep in light sandy loam, and should be allowed to remain undisturbed for three or four years. Their habit of growth makes them especially adaptable for formal locations, but they are also lovely in informal groups.

Narcissi are a large and indispensable family of early blooming bulbs. The new gardener is apt to be a bit baffled about a choice of narcissi. A wise choice will include a few of the well established higher priced varieties and a few inexpensive ones. Each year new varieties may be added. They should be planted from one to one and a half inches deep. Most of them are very hardy. Inexpensive kinds are most effective when planted in long drifts.

Tulips are much too well known to require an introduction. They come in a large assortment of varieties and provide a long season of bloom. Their wide range of vivid colors—even if they had not other virtues—would make them springtime favorites. Tulips prefer well drained soil and should be planted about six inches deep.

Lily-of-the-Valley needs an abundance of rich soil and plenty of water, but their dainty fragrant blossoms are generous reward for the extra trouble.

The bright nodding flowers of the Crown imperial makes it a charming novelty.

Anemone and Ranunculus are lovely for gardens in warm climates.

Creeping Phlox, Violets, Pansies, Violas, Myrtle, Primroses and English Daisies bloom early and supply fresh and vivid color. They make splendid ground covers.

SPRING FLOWERING SHRUBS

The selection of shrubs is a difficult one, especially for the beginner. Unfortunately, no set of rules governs all the problems of their selection. Such factors as the type of garden and its location, climate and size are contributing factors. Since shrubs and trees are permanent fixtures, unless one is very familiar with shrubs, it is wise to consult an expert. The following list includes shrubs of value for their flowers, but it is, of necessity, incomplete:

Daphnes are one of the first shrubs to bloom in Southern climates. They are neat, evergreen, and have deliciously fragrant blossoms.

Forsythia adds an early flash of yellow to the spring panorama and soon after, the Red Bud produces a profusion of pink blossoms.

There are Almonds with soft fluffy blossoms which so completely cover their slender branches that from a distance they resemble pink and white clouds.

Lilacs are an old stand-by in climates where they grow well. If care is given in selection for long time bloom, their familiar perfume and delicate colors will add interest to the garden for many months.

Tamerix blooms with misty feathery pink plumes. It is a rangy shrub and should be given plenty of room.

The members of the family of Spirea contribute numerous fountains of white blossoms to spring. Spirea van houttei is the best variety.

Weigela has won long popularity with its pink flowers. They are not delicate but are very showy.

Magnolia Soulangeana and M. Stellata are among the earliest of spring flowering shrubs, as well as being among the loveliest. They prefer acid soil.

Dogwood, a native American plant, is a splendid and much used shrub, but always seems most at home in a wooded or wild garden. They, too, need acid soil.

Other spring blooming shrubs requiring acid soil are Azaleas, Rhododendrons and several of the Heathers. If their special requirements can be met, they are joyous shrubs in the spring garden.

Dentzias now may be had in many varieties. They are charming additions to the early garden.

There are many Viburnums. Some are exquisite. V. Carlsii is a small shrub that has waxen flowers of pinkish white. The well known Snowball is Viburnum opulus. It is a large shrub and grows rapidly when it is well supplied with plant food.

Spring, being both vain and generous, will welcome the extra adornment of your garden.

SAN FRANCISCO MUSEUM OF ART

Here are some notes about the museum's current Anniversary Show of Modern Art owned in the San Francisco Bay Region:

1. Most frequently represented in the exhibition are Hofer (10), Matisse and Sintenis (9), Picasso (8), van Gogh, Nolde and Merida (6), Brook, Derain, Dufy, Kandinsky, Klee, Laurencin, Miro, Rivera, Utrillo and Vlaminck (5).

2. French and American artists are most popular among Bay Region collectors. However, the German and Mexican schools are also strongly represented.

3. There are a few gaps to be noted in the exhibition as a survey of modern art: it does not include works by the leading surrealist, Salvador Dali. The "Big Three" of the American scene, Benton, Wood and Curry, are unrepresented.

GEORGES RRAQUE IN MANY CLOTHES

There was much controversy when Georges Braque was awarded the first prize in the modern art section at the Golden Gate International Exposition with his "Yellow Cloth." The museum, following its policy of interpreting the essential trends and personalities in the art of our time, has now arranged a large retrospective exhibition of the works of this outstanding figure in modern art.

More than fifty important works will show Braque, the co-founder of Cubism, in the various phases of his development, giving evidence of his decorative power in subtle color schemes and of his lyricism of pure esthetic relations in which, to quote Duncan Phillips, "the complexities of our age are fused in a serene balance and harmony."

VERBOTEN ART FROM GERMANY

No less thought-provoking than the Breque exhibition was this month's show of examples of 20th Century German Art—a collection of seventy-five paintings and drawings by leading German artists now proscribed, first organized and held in London under the sponsorship of such men as Augustus John, the noted English painter, and Herbert Read, foremost English art critic, as protest against artistic intolerance. Many of the works once hung in public galleries in Germany.

WATERCOLOR ANNUAL

The Fourth Annual Watercolor Exhibition of the San Francisco Art Association is now being held at the San Francisco Museum of Art. Of about 500 entries submitted from all parts of the country, the jury of selection chose 123 works to be shown.

As again demonstrated in the current exhibition, artists in this region are, for one reason or another, particularly strong in the fluid medium of washes. Works by the so-called "Berkeley School" stand out for their briskness in pattern and sophistication in color matching.

The exhibition will be on display through March 3.

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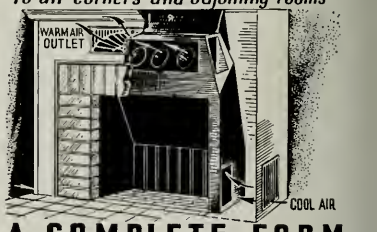

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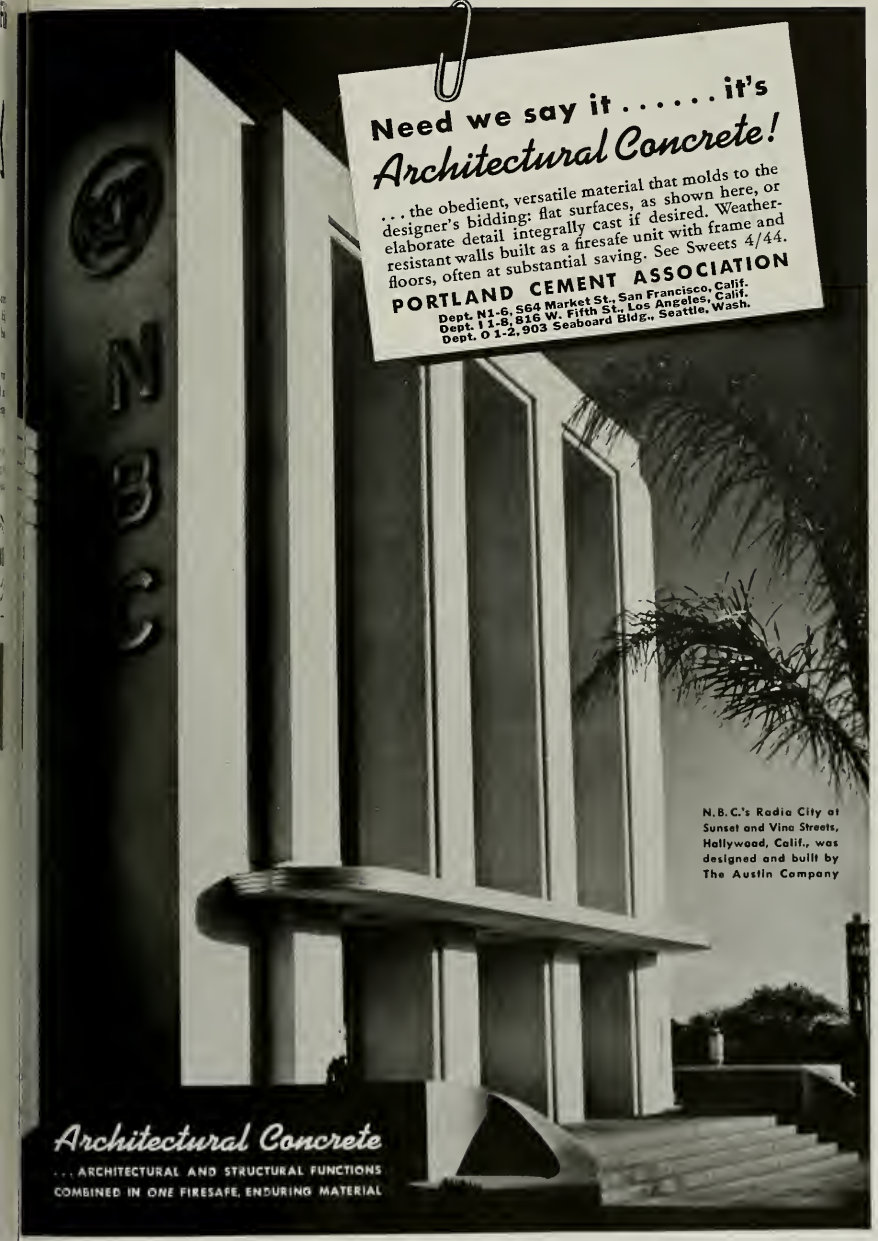
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ALL SOULS CHURCH, ALHAMBRA, CALIFORNIA

HENRY CARLTON NEWTON, A.I.A., ARCHITECT; J. EARL TRUDEAU, ASSOCIATE

ARCHITECT AND ENGINEER

VOL. 140 FEBRUARY, 1940 NO. 2

ECCLESIASTICAL DESIGN DOMINATES ARCHITECTS' WORK

By PAUL R. HUNTER

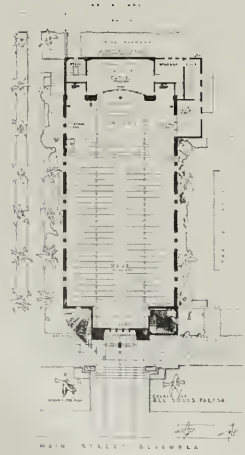
DURING the past few years the office of Henry Carlton Newton has produced the many well-planned, well-designed buildings that are featured in this issue of **Architect and Engineer.** The illustrations show a diversified practice that includes ecclesiastical, institutional, commercial, and residential work. It is in the field of ecclesiastical architecture, however, that Mr. Newton has achieved his most distinguished work. His churches are among the best that have been built during the last decade in Southern California. They are not only fresh and interesting in arrangement and appearance, but they contain advanced engineering features and the new types of mechanical equipment.

In design these churches fall into two groups: those that are in the Spanish-Colonial style and those that are contemporary in character. Those of traditional design are for the most part of exposed concrete, a treatment which has been associated with ecclesiastical work for many years in Southern California, and are enriched with carved stonework, decorative tile, and wrought iron. In two of his recent churches, Mr. Newton remarks that he took up the challenge of "expressing the modern tendency in architectural design without sacrificing the character of the Catholic tradition."

In All Souls Church a fundamental change in plan has been made by placing the choir at the rear and above the sanctuary, screened from the congregation by a wooden grille and woven hanging. While this is unusual in churches in the United States, Westminster Cathedral in England is a familiar example of this arrangement. By the introduction of a continuous glazed section in the "Lamella" roof of the nave, the interior has been given a most striking effect, and is illuminated by the soft light that filters through the amber glass. And departing from the customary Latin, the inscriptions are in English. On the principal elevation of St. Michaels a very fine use has been made of sculpture cast in concrete from carefully prepared and waxed plaster waste moulds. The boldly executed figure of the patron saint, placed above the entrance doors and silhouetted against the window shafts, sets the character of the church. Distinctive details are to be found in the altars, pews, and lighting fixtures of these two edifices.

Lighting Fixtures by Wagner-Woodruff

INTERIOR OF NAVE, ALL SOULS CHURCH, ALHAMBRA, CALIFORNIA



PLAN

The engineering of these buildings has been not only thoroughly practical but highly imaginative, and in each case the exterior is an honest expression of the structural features. In addition to the calculations for vertical and horizontal stresses, much thought has been given to the use of rough and finish form boards and of the points at which construction and pour joints might occur. Carefully placed acoustical materials have been employed on walls and ceilings to produce the best possible speaking conditions. Heating and ventilating systems in most cases provide for summer cooling.

As might be expected, all the details of the drawings, specifications, and contracts receive the greatest care and attention. Mr. Newton has given several talks before the Southern California Chapter of the American Institute of Architects on the use of the card system of specification writing. In his practice Mr. Newton has frequently had occasion to draw upon the best talent for aid and consultation. For presentation drawings, many of which are illustrated in this issue, he has engaged the services of Robert Lockwood and Frank Jamison; for structural engineering, R. Howard

DETAILS, MAIN ALTAR,
ALL SOULS CHURCH,
ALHAMBRA,
CALIFORNIA

Photo by Miles Berne

DETAIL OF ENTRANCE, ALL SOULS
CHURCH, ALHAMBRA,
CALIFORNIA

HENRY CARLTON NEWTON, A.I.A.,
ARCHITECT, AND
J. EARL TRUDEAU,
ASSOCIATE

SAINT MICHAEL'S CHURCH, LOS ANGELES, CALIFORNIA

SCULPTURE, "SAINT MICHEL" OVER MAIN ENTRANCE

Annin, and for mechanical engineering, Ralph Phillips. Mr. Newton's associate, J. Earl Trudeau, has been an important contributor in the quality and freshness of the firm's designs.

FINE SCULPTURE IN ST. MICHAELS

THE problem of designing a concrete church for the Archdiocese of Los Angeles called for considerable thought in expressing the modern tendency in architectural design without sacrificing the character of the Catholic tradition.

St. Michael's Church, with somewhat of a traditional plan, was restricted by certain property limitations and budget requirements. The church, which is 156 feet in length and 81 feet in width, seats approximately 750 persons. With a large choir loft over the narthex and accentuated sanctuary, the boys' and priests' sacristies on either side of the sanctuary connected by an octagonally shaped ambulatory,

SANCTUARY

Fixtures by Wagner-Woodruff

CHOIR BALCONY

Windows by Los Angeles Art Glass Co.

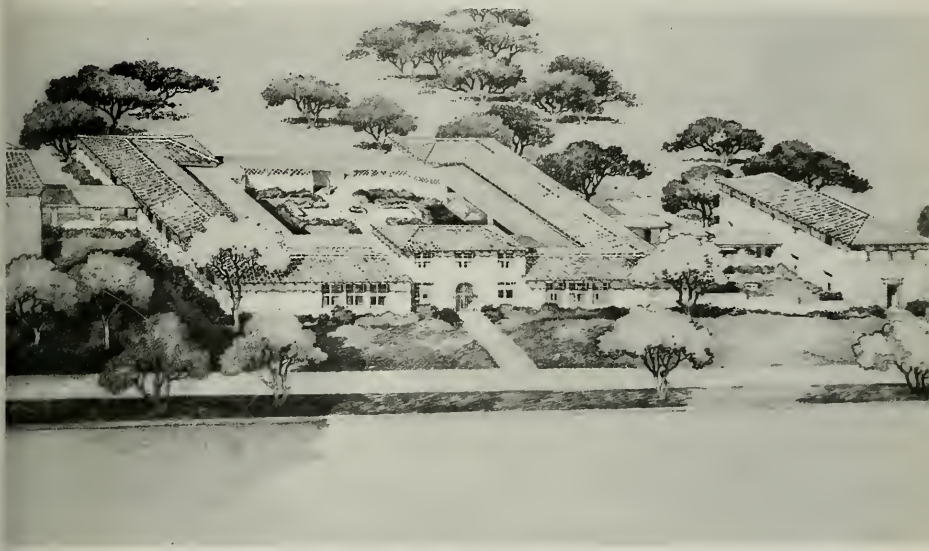
three high arches flooded with light through structural glass blocks, form the setting for the side altars at either end of the transcept.

Particular attention is called to the sculptured relief work on the principal elevation with special reference to the huge figure of St. Michael, all of which were integrally cast in concrete as the various pours progressed. The skillful use of plaster waste moulds gives a designer the opportunity of a sculptured effect at a very low cost. All the waste moulds on St. Michael's Church were cast in two-tone plaster and the interior of the moulds were coated with a wax preparation, all of which simplified the stripping.

The building is entirely of reinforced concrete. Eight reinforced elastic arch ribs carry a concrete beam and slab roof construction with a rather steep pitched roof. The side walls are of ribbed construction with the ribs running vertically from the floor to the roof with a horizontal bond beam at the sills of the windows and at the eave line. The ribs were

ARCHITECT'S RENDERING, CHURCH OF OUR LADY OF GUADALUPE

ARCHITECT'S RENDERING, CHURCH OF ST. JOAN OF ARC, LOS ANGELES



designed as fully continuous elastic arches with partial restraint at the footings and with tie rods in the floor slab to eliminate any tendency of the footings to slide. The tie rods were designed for a low unit stress and were provided with turnbuckles for pre-stressing before the shores were removed from under the arches. That these precautions were effective was evidenced by the fact that no measurable settlement of the arches could be observed by careful checking when the shores were removed and the roof loaded.

The entire building was designed for lateral wind and earthquake stresses as required by the Los Angeles City Building Code.

MODERN INFLUENCE ON CHURCH STYLE

IN the realm of architectural practice ecclesiastical design is one of the most interesting projects confronting the architect. The influence of modern design and material on the somewhat traditional styles is a factor requiring the most careful and constant study. The balancing of the influence of modern architecture so as not to produce a grotesque style makes the choice of material one of vital concern. The use of concrete for church construction gives the designer the opportunity of expressing the modern character of our generation predicated on a material which lends itself so easily to "designed architecture," while this premise is not so true, if one slavishly copies a traditional style.

The steady influence of modern architecture during the past twenty years has, in some instances, so warped the imagination of designers that, when applied to ecclesiastical architecture the devotional character and sacredness of atmosphere is frequently lost in a wild shuffle of horizontal bands, metal trim, wishbone roofs and airdrome facades.

Architecture, together with all art, is the exact expression of the mental, social and spiritual temper of the times that produce it. That modern ecclesiastical architecture should be what it is, is eminently fitting. However, the qualities of trivial fashion and triumphant individualism should not obtain in a portion of a church which we hold to be changeless and stable.

RENDERING, HOLY CROSS PARISH HALL AND ENTRANCE GATES TO HOLY CROSS CEMETERY, LOS ANGELES

T. AMBROSE SCHOOL AND CONVENT

ENTRANCE DETAIL, SANTA MONICA BOULEVARD SCHOOL, LOS ANGELES
LEFT—DETAIL

H. C. NEWTON AND
R. D. MURRAY, ARCHITECTS

HOUSE FOR JAMES EDWARD GRANT, LOS ANGELES

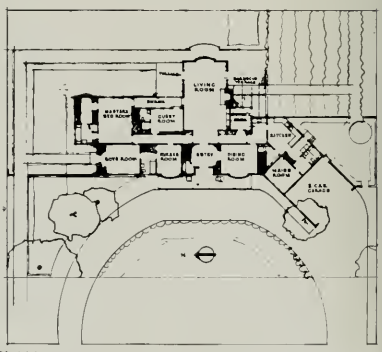
VIEW THROUGH GATES TO RESIDENCE OF MR. AND MRS. JAMES EDWARD GRANT, LOS ANGELES, CALIFORNIA

HENRY CARLTON NEWTON, A.I.A.,
ARCHITECT
J. EARL TRUDEAU, ASSOCIATE

Residence of James Edward Grant, Los Angeles

LIVING ROOM

DINING ROOM ALCOVE



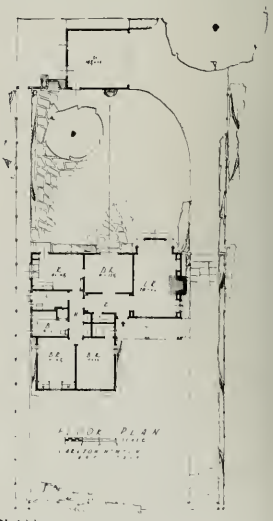
PLAN

Residence of E. S. Hoyt, Jr., Rolling Hills, California

PLAN

Residence of Edward J. Francis, San Marino, California

DETAIL OF LIVING ROOM



PLAN

Apartment Building For F. F. Gay, Santa Monica, California

EIGHT FAMILY APARTMENT HOUSE FOR
LOUIS STOECKEL, LOS ANGELES

HENRY CARLTON NEWTON, A.I.A., ARCHITECT
J. EARL TRUDEAU, ASSOCIATE

Residence For L. S. Precourst, Los Angeles, California

SECOND FLOOR SITTING ROOM

LIVING ROOM

Alterations to Banking Room, Farmers & Merchants Bank, L. A.

PRESIDENT'S OFFICE, FARMERS AND MERCHANTS BANK, LOS ANGELES

HENRY CARLTON NEWTON, A.I.A., ARCHITECT
J. EARL TRUDEAU, ASSOCIATE

NORTHERN CALIFORNIA CHAPTER ANNUAL MEETING

THE annual meeting of Northern California Chapter, A.I.A., was held at the St. Francis Yacht Club at 6:30 p.m. on Tuesday, January 30, President James H. Mitchell presiding.

As is customary at annual meetings, Mr. Mitchell, the president, gave a brief summary of the work accomplished by the executive committee during the year.

The secretary-treasurer's report which followed rendered an accounting of the finances and status of membership in the Chapter that showed it to be sound and progressive.

Andrew Hass, chairman, reported upon the activities of the committee on relations with the construction industry, gving a detailed account of meetings held with various organizations to more closely correlate the architectural profession with the building industry. His account of the year's work was well received, and a motion was passed commending Mr. Hass and the committee for their fine work.

John Bakewell, Jr., chairman of the institute committee on education and registration, gave a brief outline of plans for coaching courses to be held to assist candidates preparing for the State Board examinations. The system, with the backing of the Institute, was recognized as being a noteworthy effort on the part of the committee to definitely assist and cooperate in the selection of well-trained and properly prepared men for the profession.

Mr. Bakewell also announced the honor bestowed upon the Chapter by the election of Frederick H. Meyer as chairman of the jury of fellows of the Institute.

An anouncement was made of the planning section study of the Commonwealth Club, to be conducted by Ronald Campbell, the subject to be "Should the Bay Region Sponsor a Regional Plan for the Bay Area?"

A report by Eldridge T. Spencer, chairman of the allied arts committee, was read. Mr. Spencer stressed the increasing spirit of cooperation and collaboration between the architects and others of the allied arts, and expressed the hope that this spirit would continue to flourish.

Thomas J. Kent, Chapter representative to the California Roadside Council, described efforts of the Council to keep billboards from marring scenic and rural highways. Mr. Kent told of the formation of county planning commissions and also of the legislative efforts made to protect our highways from defacement.

Frederick H. Reimers spoke as chairman of the committee on public information. His report described the various activities and accomplishments of the committee, notable among these being the repeal of the San Francisco Licensing for Revenue law with its accumulated back taxes and penalties. Mr. Reimers also described meetings with other organizations at which the committee had representatives who took an active part in co-operating with these various groups.

Gwynn Officer, chairman, described activities of the committee on public relations. He regretted that the necessary work entailed by legislation early in the year had prohibited any kind of survey of Government work being made, but spoke at length upon the meetings attended with the Pacific Coast Building Officials' Conference. Mr. Officer spoke of the building code recently completed under the auspices of the California State Chamber of Commerce, and of the problems to be solved if this code were to be adopted for the State.

Harry Michelsen, also of the committee, spoke on relations with industrial organizations. Mr. Michelsen's motion, seconded by Mr. Appleton, that the Chapter meet jointly with the State Association of California Architects on the last Tuesday of March, 1940, was carried.

Mr. Michelsen spoke at length upon the proposed House of Representatives bill No. 7635, shortly to come up for vote. Discussion brought out that the Chapter is definitely in favor of private architects performing work for the Government, but only in accordance with the ethics and regulations of the American Institute of Architects, and that the Chapter is vigorously opposed to any legislation requir-

(Turn to Page 69)

MODERN ARCHITECTURE—HERE TODAY—WHITHER TOMORROW?

By KENNETH C. BLACK, A.I.A.

MOST architects today are pleased to observe the increased interest which is being taken in architecture by the general public. They are especially pleased when that interest extends into the realm of architectural theory, because when the public becomes interested in the theoretical as well as the practical problems of a profession we may reasonably expect that interesting developments of major importance are taking place.

Today, one can scarcely pick up a magazine which contains a section devoted to building without reading the words, "Modernism," "Functionalism" and "The International Style," as well as such time honored stylistic designations as Colonial, Georgian, French, English, and so on, ad infinitum.

A few years ago, whenever the building section of some widely read magazine published a design which looked "different" to the average reader, and whenever some leading modernist with a highly developed sense of news value released a startling statement to the public press, architects everywhere were asked, "Do you really think Modern design is here to stay?"

Today, that question is not asked as frequently because during the past five or ten years everyone has become so accustomed to seeing buildings designed in the so-called Modern style that the answer is obvious.

The final, definite, death blow to the wishful thinking of those who had hoped that modernism was simply a passing fancy, was delivered a few short months ago when a distinguished jury of prominent architects selected a Modern design submitted by the Saarinens and Robert Swanson in the national competition for the selection of an architect for the Smithsonian Gallery of Art in Washington. When one considers that Washington is regarded by most modernists as a hot-bed of archaic architecture: when one realizes that all public buildings in Washington have heretofore been made to conform to a traditional pattern in the interest of the harmony of the city as a whole: when one observes that it is proposed to erect Saarinen's design on the Mall, directly opposite the traditionally designed National Gallery of Art: when one reflects that the members of this jury must have been fully conscious of the responsibility which rested upon them to preserve the character of the Mall: and when in spite of the pressure exerted by all these intangible but powerful forces of tradition, the jury still selected a Modern design for that particular location, it should be obvious to all but those who **will not** see that not only is Modern design here to stay, but that it has taken on a cloak of such eminent respectability that it has been able to supplant traditional architecture in this country at its very strongest point.

I am not saying, mind you, that I think the design picked by the jury will actually be built, because the competition was primarily for the selection of an architect, rather than for the selection of a design. When one remembers the furor which was created in Washington last year over the proposed removal of a few cherry trees to make way for the Jefferson Memorial, it will be surprising indeed if a battle of major proportions does not develop over the appropriateness of the Smithsonian design to its site when funds for its erection are sought. But, regardless of the outcome of such a battle,

EDITOR'S NOTE: Part of a lecture delivered at the Detroit Institute of Arts and reprinted from the Bulletin of the Michigan Society of Architects, of which latter organization the author is president.

even if the architects are forced by public opinion or the Fine Arts Commission to cast their final design into a more conventional mold; the important fact is that the forces of modernism have won their battle with tradition. I doubt very much if any architect who enters a national competition in the future will waste his time in the preparation of a design which depends upon any historical style for its inspiration.

WHAT IS THE LIMIT OF MODERN DESIGN?

So, today, the question is not whether Modern design is here to stay so much as it is a question of how radical, and how rapid its development may become in this country.

In order to even approximate the answer to this question it is essential to analyze the reactions of the architects themselves to this modern trend. Because it is reasonable to assume that the members of my profession will be designing modern buildings in the future with the same competency which they have displayed in designing traditional buildings in the past—and that the violence, or lack of it, with which modernism develops will be measured by the **"composite attitude"** of the architects toward it. I am using the word "composite attitude" advisedly, because obviously architects as individuals may disagree violently. In fact we not only may disagree—we very frequently do!

A friend of mine likes to say that there are two classes of architects. One class is composed of men who regard themselves as God's gift to the world, to their profession, and above all to their clients. The other class are men who are merchants of architecture.

Individuals in the first category develop an intense personal philosophy which admits of no compromise. This personal philosophy reflects itself in a purely personal type of design, and all of the commissions which come into such an individual's office result in buildings which conform to this personalized design. This type of architect assumes as a matter of course that his client will recognize the all inclusive wisdom he possesses and will, whenever a difference of opinion arises, bow unquestioningly to the superior judgment of his architect. Nearly all geniuses, both real and synthetic, belong in this class.

This class is relatively small in number and each individual, being so sure of the inevitable correctness of his own judgment, does not hesitate to experiment with his client's money in trying out new materials, new methods of construction, and new types of design. Sometimes these experiments are successful and when they are the rest of us cautiously adopt such ideas as can be divorced from the personality of their originator and put into common use.

The second type of architect, the merchant of architecture, comprises at least 90 per cent of the members of my profession. By classifying an individual as a merchant of architecture I do not mean to say that he is engaged in the business of selling stock plans. But I do mean that if a client wants plans for a Colonial house the architect will design a Colonial house for him. Or if his client wants an English house, or a Gothic church, or a Modern store front, he will design those. In each case he conceives it to be his professional duty to advise his client as to how he can best make use of the technical and mechanical developments in the building industry which are pertinent to the building he proposes to build. The architect then proceeds to design, as directed, the very best Colonial, or English, or Modern building he can produce for the budget his client allows him.

This difference in the mental attitude of architects toward our profession is really a fundamental difference of opinion as to the architect's function, and it raises an interesting theoretical question. It has frequently been said that the customs, manners, ideals, and inspirations of the people of any given era can be read by the architecture of their time. If that is true, then which type of architect is doing the best job of interpreting our own times? Is it the individual genius who is expressing his own personality, or is it the average architect who is giving permanent form to the ideas of his clients? The genius maintains, of course, that he is a genius precisely because all the constructive forces of his era are con-

centrated in him, and that in expressing himself, he is, ipso facto, expressing the times in which he lives at their very best. The average architect disagrees with the assumption and maintains that a true expression of the times can only be achieved if the architect submerges his own personality in that of his client. With such a philosophy he maintains that during the course of his professional life he will have given expression to the personal wishes of hundreds of individuals rather than simply to his own, and that in so doing he is the one who is producing a more honest interpretation of the times in which he lives.

I think that the difference in the final resulting building which is brought about by this fundamental difference in conception of the architect's function, can be clearly illustrated by the following example:

DIFFERENCE IN THEORY OF ARCHITECT'S FUNCTION

You all know that Mr. Frank Lloyd Wright is considered by many people to be a genius—and you are all familiar with the type of design which has made him famous. Now suppose your name is Charlie Smith and that you employ Mr. Wright to design your home. When the building is finished, people will drive by and say, "Oh, look, there's the Frank Lloyd Wright house that Charlie Smith lives in." But, if instead of employing Mr. Wright you employ a merchant of architecture, people will say, "There's Charlie Smith's house. I think John Doe designed it." In one case the house reflects its designer and in the other it reflects its owner.

Now, my reason for dwelling at such length on this difference in theory is because I think we can reasonably assume that it will have a very definite bearing on the rapidity with which the modern style develops. Because, if most architects are interpreting the desires of their clients, then new ideas will be universally adopted only as fast as the general public permits. And the building demands of the general public are influenced by many factors, of which I am afraid pure artistic appreciation is a very minor element.

In estimating the reaction of the public to modernism I think the experience of our own office is typical of that of the average architect, and if you will pardon a few personal references we will, for demonstration purposes, make that experience a matter of record at this point.

Our office is a small office in the center of an area having a population of about 125,000 people. As is usual with such small offices, we have not specialized, but have designed all types of buildings and in doing so have come in contact with all types of clients.

During the past ten years our commercial and industrial work has nearly all been designed in varying degrees of modernism. We have found that the owners of such buildings permit the use of that style either because they feel its novelty has a definite advertising value, or because they are primarily interested in the practical or economic aspects of their problem and leave its architectural treatment to the architect.

Many public bodies too, permit the use of a conservative form of modernism in the design of public buildings. They seem disposed to trust the architect's judgment in matters of design, probably on the theory that, being a business man, he will be smart enough to keep his imagination within the bounds so as not to jeopardize his chances of receiving still further commissions.

LOANING COMPANIES PREFER TRADITIONAL DESIGN

In the case of residential architecture, however, the picture changes completely. I would say that we have designed an average of at least ten residences a year during the past ten years and I can say further that every one of these clients has been asked if he would like a modern house. But in spite of all the pictures of modern houses that are being published today, and in spite of all the theoretical advantages of modern planning, we have yet to build our first residence in the modern style.

Residential clients seem willing to let their architects use a reasonable amount of freedom

in designing their homes but they won't be able to label the result "Colonial" or "English" or "Georgian" or whatever the closest historical style happens to be. And in many instances, although the client himself may not object to having a modern house, he finds that the financial institution which is to carry his mortgage informs him that he must either build a house based on tradition design or look elsewhere for his money. This apparent unwillingness of most banks and mortgage companies to risk their money on what they still regard as an experimental type of architecture is a very powerful force in retarding the development of modern residential design. It cannot be overlooked in any attempt to prophesy the future of modernism.

I have stated that in interpreting their client's wishes most architects design all sorts of buildings and design them in all styles. Usually when you attend a lecture on architecture you are listening to a gifted individual who has made a name for himself by creating a series of designs which are so individualistic that he is asked — or asks himself — to make public speeches about them. But I don't recall that I ever attended a lecture where the audience was shown the sort of work that is done by the average architect's office in this country. . . .

Now, quite naturally architects who are designing buildings in several styles resent certain assumptions made by the out and out modernist.

To begin with let's look for a minute at this word "functionalism." The dictionary definition of functionalism is, "The adaptation of form or structure to function," and function itself defined as, "The natural, proper, or characteristic action of anything." During the development of Modernism, however, this word as it relates to architecture has been invested by the modernist with a positive meaning and a negative inference at one and the same time. When a modernist says that modern planning and design are functional, he tends to create in the mind of his audience the impression that traditional design is **not** functional. More than this, he frequently accuses architects who do not see eye to eye with him, of being false to the ideals of their profession and of being insincere in their work. The opinions of such individuals, aided by a sensational type of journalistic presentation, have gradually brought a large section of the public to believe that every building which has corner windows, gas pipe stair railings, glass block bathroom walls, and a flat cantilevered roof is functional. And the obvious hope of such individuals is that the public will believe that the more gas pipes there are the more functional the building is.

Now upon reflection, it is obvious that a building is not functional for any of these reasons, but unfortunately the public does not have time to reflect. Consequently this impression of functionalism persists, and will probably continue to persist until the public gets tired of seeing gas pipes above ground.

A MISNAMED STYLE

The "International Style" is another phrase which is often heard today. The obvious inference of this term is that it designates a type of design which is equally at home in any country. Supposedly the rapid interchange of ideas between men of different nationalities, plus the use of mechanical and technical improvements in the art of building, have combined to create a style which will be universally understood and admired. Up to the present time, however, most of the buildings which have been advanced by their creators as examples of this style have been the most radical of all. Several of my friends in the profession feel that the term is merely a convenient one to apply to the work of foreign architects who have come to this country recently and who have continued to design buildings in the same style they used in the country they left, without any apparent assimilation of American ideals. Such buildings, being obviously not American architecture, although admittedly erected here, must be made to fit into some category and since similar buildings can be found in certain European countries, what is more natural than to call them examples of an "International Style?"

I am not prepared to say whether this opin-

ion on the part of some of my confreres is true or false, but for my own part I find it difficult to dissociate architecture from geography. It is hard for me to image a type of design which will look equally at home in the everglades of Florida, the cornfields of Iowa, the Alps of Switzerland, the sunshine of Italy, and the damp fogs of London—even though I am perfectly willing to admit that it is now mechanically possible to build the identical building in all those places and by the miracle of air-conditioning to be perfectly comfortable in it at all times and under all conditions of moisture and temperature. But the art of designing buildings goes deeper than merely an achievement of mechanical perfection and I fail to see that any universal architecture can be developed simply by imposing the forces of mechanics on the forces of nature without due regard for both.

There are two further factors which should be mentioned in a discussion of this sort, since a combination of the two is bound to result in a rapid development of Modern design. The first of these factors is the publicity which is being given modernism by both professional and general magazines, and the second is the change which is taking place in the teaching of design in our colleges of architecture.

Some of my friends in the profession honestly believe that our professional magazines are going out of their way to publicize the work of certain modernists. In some quarters there is a definite feeling that these individuals are being deliberately press-agented.

Magazines publish what their readers want to see. If they don't, their subscriptions fall off and their advertising revenues drop. . . . Many unusual designs are published because people like to look at pictures of queer houses even if they won't live in them. I once loaned such a magazine to a client whom I had hoped to interest in building a modern house. When he brought it back he said, "Every time my wife and I turned a page in that magazine we felt sorrier than ever for folks who can't live in a nice little Cape Cod cottage like we want you to design for us—dining room and all!"

But the fact remains that Modern designs are being published with increasing frequency and the more of such work published the more receptive the public mind will become toward it.

BAUHAUS TECHNIQUE SUPPLANTS BEAUX ARTS

An indication of the probability that that day will not be long in coming is the change which is taking place in architectural education. Fifteen years ago no architectural faculty was considered first class unless it had on its staff a professor of design who was a Frenchman and a graduate of the Ecole des Beaux Arts at Paris. Students were thoroughly grounded in the fundamentals of traditional architecture and such evidences of modernism as were permitted to creep into their designs were made to conform to the principles of the Beaux Arts. Today the schools which are receiving the most publicity (some architects prefer the word "notoriety") are those whose leading professor of design is a German, Hollander, or Northern European—and the fetish of the moment is the Bauhaus rather than the Beaux Arts.

When the present generation of students, with their training in Bauhaus technique, commence practice and secure clients whose minds have been prepared to receive modernism through the medium of present day publications, a definite abandonment may be the signal for the emergence of an inspirational type of design or it may be a lapse into complete inanity. Which it will be depends on whether the things which are being taught are fundamental or simply novel.

Many of my fellow architects feel it is high time we stopped our subservient acceptance of foreign ideas and stopped singing the praises of bizarre foreign designs without subjecting them to the same critical analysis they would receive if they were put forward by a member of our own profession in this country.

There is a very definite feeling that it is time we concentrated on the development of a type of modern architectural design which is basically American. One of my friends very

aptly phrased it this way: "Fifteen years ago we were kneeling at the feet of Frenchmen. Today we are bowing low before the Germans and Dutch. Who will we worship next—the Chinese?"

WHY NOT DEVELOP AN AMERICAN STYLE?

We can all remember how impossible it was a few years ago for a musician to attain any standing in this country unless he first made a concert tour of Europe and returned with the cheers of the European concert halls preceding him through the medium of his press agent. Many musicians even went so far as to change their names to something which sounded Italian or German. Today American musicians no longer need to do that. Musical appreciation has reached a point where most people can recognize good music without first having to know the name of the composer or of the artist who is playing or singing. We have become rather proud of American music, and of American musicians.

Is it too much to hope that a similar situation will soon develop with relation to American architecture? Is it too much to ask that when the present educational cycle has run its course the next generation of American students of design will be trained in Modern American design by American teachers of design? Or should we let the Chinese have their innings first?

Now in making these remarks I do not intend to be disrespectful to such men as Paul Cret, Professor Hebrard, Professor Saarinen, or the late Professor Rousseau under whom so many of the men of my generation received their training in design. On the contrary it is precisely because these gentlemen have done such a good job of raising the standards of architectural design in this country that we can now begin to feel less and less dependent upon the theories of the gentlemen from abroad who are following in their footsteps. Modern American architecture is coming of age and we should soon be able to travel our own road in our own way.

I presume that in making such statements I will be accused of indulging in very shallow thinking indeed. You will remind me that in the realm of ideas there is no such thing as an international boundary line. You will repeat that old bromide to the effect that if the Greeks had spent their time copying the Egyptians there would have been no Parthenon, and if the French had copied the Greeks there would never have been a Gothic cathedral. And so, you will say, why should we go on copying Colonial and Georgian houses?

To all of this I agree, but let me ask you this: Do you honestly believe there is any basic difference between a designer who copies a New England Colonial doorway and a designer who copies the entrance of a modern Dutch apartment house? Do you honestly think there is any difference between the designer who starts to design a building with a preconceived idea of making it Georgian and the designer who begins with a preconceived idea of making it resemble the latest published work of the Bauhaus?

To me there is no basic difference. As a matter of fact it is entirely conceivable that a designer who creates a building in which he makes a very free use of Colonial or Georgian tradition may contribute more to the development of true American architecture than a designer who slavishly copies the work of some European modernist.

If the Greeks developed the Parthenon as a result of **not** copying the Egyptians; and the French developed Gothic as a result of **not** copying the Greeks; then how do we ever expect to develop a truly distinctive American architecture unless we in our turn stop copying the architecture of present-day Europe?

We don't live like Europeans. We don't work like Europeans. We don't play like Europeans. We have a country which is unique and it should find expression in a type of modern architecture which is equally unique—an architecture which will combine the heritage of our ancestry, the intellectual freedom of our democracy, the inventive genius of our people, and a fundamental understanding of beauty in all things—without which no great architecture can be possible.

LIGHTING AN INTEGRAL PART OF GOOD DESIGN

By NATHAN H. GRAVES

In this issue begins a series of practical articles on Modern Lighting by Nathan H. Graves, lighting consultant for the Pacific Gas & Electric Company, chairman of the San Francisco City Beautiful Lighting Committee and chairman of the San Francisco Bay Cities Illuminating Society. Mr. Graves was a lighting consultant for interiors at the Golden Gate International Exposition. Tentative subjects of his articles to be run through the remaining months of the year will be as follows: March, "Garden Lighting;" April, "Exposition Lighting—How to Apply it to the Home;" May, "Lighting for Summer Sports, Tennis, Lawn Bowling, Badminton, etc.;" June, "Home Lighting—Utility Rooms, i.e., Kitchen, Baths, Dressing Rooms, Laundry;" July, "Home Lighting—Bedrooms, Living Rooms, Dining Rooms and Play Rooms;" August, "School Lighting;" September, "Commercial Lighting—What the Small Store Owner Should Know About Lighting;" October, "Commercial Lighting—Department Store Illumination;" November, "Lighting for Festive Occasions, Christmas Lighting;" December, "The Effects of Using Colored Lighting on Home Interiors and Exteriors."

This month's article describes the sensational lighting of the recently completed St. Francis Hotel cocktail lounge, one of the outstanding achievements in recent artificial illumination.

NEVER in the history of artificial lighting have we had so many flexible light sources. To view the past architecture is to review many types and designs of buildings, beautiful by day, but entirely lost with the setting of the sun. Today architects are incorporating lighting as an integral part of their design. The temples of the past are now repeated but are no longer lighted with oil lamps and torches or other crude means. Man's very existence now depends on his ability to work indoors. We have taken a human machine that was built to live out in the open, to see great expanses and long distances and then in a few short generations have tried to readjust that machine to closed quarters, poorly ventilated and dimly lighted. Then we have given him tasks that are harder on the nervous system than were the labors of the galley slave.

The average successful architect of today has been practicing for some twenty years. The tremendous strides that have been made in the lighting field alone have made it necessary for him to depend on an outside source for up-to-date information. We in the lighting field are to be censored for most of the glaring examples of bad lighting so prevalent today, but the fine work in research by the Illuminating Engineering Society and several of the leading manufacturers has made available information that is dependable and necessary in the engineering of any lighting problem. The architect now can get reliable lighting information from several sources. These may be classified as: (a) The manufacturer's representative, naturally competent to recommend his type of fixture where it will do the best work. (b) The jobber's representative; this type may or may not be a trained lighting man and usually represents not only lighting fixtures but all types of electrical supplies. (c) The manufacturer of custom built fixtures, or his salesmen; here is one of the vital points in the lighting field, because the designer is handy and can work directly with the architect and a closer coordination in design can be realized. It is rare that good lighting and good design can not be worked in together. (d) The public utility lighting representative; because the life blood of the electric utility is realized in lighting revenue it is particularly important that they have men so well trained and posted on the latest developments that their recommendations should be recognized as reliable. Also because no particular manufacturer is considered, an unbiased recommendation is realized. Public utility lighting representatives are usually instructed to base their recommendations on the standards as set up by the I.E.S. It is unfortunate, though, that many of these lighting men have had no architectural background. (e) The last and most important type of lighting man in the field, is the trained electrical engineer, who has gone into illuminating

engineering. He is up to date on the latest developments in the field, has usually some architectural training and is probably a member of the I.E.S. (All members receive the I.E.S. Transactions which help to keep them in touch with the entire country.) This type of engineer may be in business for himself and is well qualified to lay out an entire electrical system, including the lighting. Several of the manufacturers of lighting fixtures have such men on their staffs, the lamp manufacturers have many of them in their research laboratories as well as in their larger district offices. The utilities endeavor to have this type of trained personnel.

The architect has many lighting men calling on him and it is not always the right one that sells himself to assist on a project. If the architect will always check whether the lighting man is a qualified engineer first, he will be sure that the finished plans call for the best and most economical system possible. In the last ten years most of the office buildings on the Pacific Coast have been electrically obsolete before they were opened. The time to take out insurance against this is before construction begins.

ST. FRANCIS HOTEL COCKTAIL LOUNGE

A very successful job of remodelling has been recently completed in the St. Francis Hotel, San Francisco. The old lounge has been entirely rebuilt into a cocktail lounge so unusual and beautiful that it is commanding international comment. The architect, Timothy L. Pflueger, with his flare for the unusual, has taken the romantic background of the Gay Nineties and combined it with a touch of the Roaring Forties. Out of it has come a symphony of ever-changing colors against a background of black patent leather and warm tone mirrors.

Albert Coddington, the electrical and illumination engineer of this installation, gives proof to the desirability of having such services.

The room is located off the lobby on a corner of the hotel, with the width of the room on Powell Street and the length on Geary Street. The lounge has four entrances (that in itself is unique)—one from Powell Street, one from Geary Street, a lobby entrance and one that the patrons of the Mural Dining Room may use.

The picture does not disclose the colors used in the lounge, and so we will have to describe them. The main features of the room are the black patent leather walls and a ceiling of lucite, a product of Du Pont and the first of its kind in the United States. The carpet is a turquoise color made by Bigelow Sanford, and is woven to give the effect of handcarving.

The chairs are in chartreuse and were especially built for the St. Francis Hotel in a style that has proved very comfortable.

At the windows Venetian blinds have been used with rich looking white draperies, specially woven of drape silk. To complete this color picture there is a beautiful arrangement of butterfly orchids that are on the back bar behind the cash register.

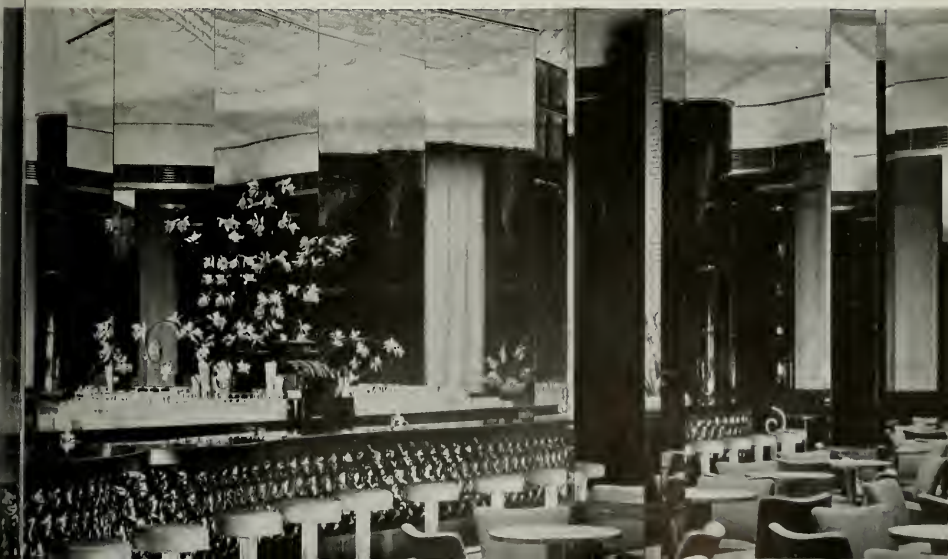
As the picture shows, the patent leather walls are in panels of which there are about 1600. Each panel is an individual section over which the patent leather, when soaking wet, was stretched and allowed to dry in an even temperature. This is an important item because if allowed to dry too fast, it would crack the leather, and if too slow, it would not tighten on the frame.

The actual making of the ceiling is credited to Dave Swedlow of Hollywood, California, who created the lucite ceiling from blueprints furnished him by Mr. Pflueger. Mr. Swedow, who received the lucite from Du Pont in sheets measuring 36″ x 48″ and 1/4″ thick, cuts them to fit the dies made according to the blueprints and then subjects them to a special heating process treatment before placing in the dies to acquire the desired relief and shape. The various pieces are then welded together into sections and hung in place by means of metal bars suspended from the real ceiling, allowing an 18″ space for the lights to be installed. These sections are removable in case anything goes wrong with the lights. Another interesting use of lucite in this room is the bar stool rods.

The electrical installation includes a considerable list of lighting equipment and controls.

(Turn to Page 44, Second Column)

TWO VIEWS OF THE MUCH-TALKED-ABOUT ST. FRANCIS HOTEL COCKTAIL LOUNGE, REPUTED TO HAVE COST ITS OWNERS $100,000—PATENT LEATHER WALLS, LUCITE CEILING, ORCHID TRELLIS, UNUSUAL LIGHTING EFFECTS, COLOR, ARE SOME OF THE FEATURES.



SCHOOLS SHOULD LEAD IN DEVELOPMENT OF MODERN DESIGN

By SUMNER SPAULDING, A.I.A.

THERE seems to be some question in the minds of educators as to whether the general interest of the public warrants the continuance of the effort to develop a modern architecture. Certainly the conscious support by the public does not warrant the effort. That, however, should not discourage the schools in continuing with their research. Public interest has never supported a radical change in the beginning; in fact the public more frequently organizes opposition. For example, recall the trouble Robert Fulton had in getting the public support in his experiment with the steam boat. Today those who oppose slum clearance would lead one to believe that anyone whose name is connected with such a project must be a thief and a scoundrel. These examples are only isolated instances of the constant opposition the public shows to progress of all kinds, and I therefore see no reason for allowing the apathetic attitude of the people to hinder the development of a new architecture.

In the history of architecture we are taught that the flowering of a civilization is always reflected in its architecture. The Parthenon is the shining example of the great classic period whose architecture was frankly based on the post and lintel system of construction without any attempt to conceal this fact. The gothic cathedral, developed during the height of the middle ages, was an outgrowth of the arch and vault system of construction and in this style again the structure is the important thing, all else being subservient to it. These two styles, the classic Greek and the gothic, are the purest architectural styles in that they most successfully express the system of construction underlying them. Today can anyone look at the San Francisco Bay bridges and not see new form dependent upon the modern principles of construction in steel and concrete? The immense possibilities of such construction are visible all around us and it does not take much imagination to conceive a new form of architecture emerging in the new materials. Until now, however, these fresh structural solutions have usually been concealed or disguised by historical forms and ornament. In this the modernist is as much a culprit as the traditionalist. Surely Frank Lloyd Wright's early dingle dangles are as offensive as gothic blurbs hanging on a steel frame. It is strange that the churches who claim to stand for truth and beauty are perhaps the greatest offenders. If architecture reflects the state of civilization which produces it, church architecture of today might indicate there is a touch of hypocrisy within the philosophy of the church itself. At any rate, if Christ is truth, he is deeply buried in the reinforced concrete gothic edifice.

Certainly the schools of architecture must carry the banner for sincere modern expression in architectural form. They are the research laboratories where this expression must be developed. Those few of us who think we see the light must struggle to see the schools develop unhampered by fuddie-duddies who feel it is their God-given mission to put sanity in art.

Abstract of talk delivered at the University of Southern California, January 19 at dedicatory exercises of Harris Hall of Architecture. Pictures and plan on Pages 8 and 10.

ST. FRANCIS HOTEL COCKTAIL LOUNGE

(Continued from Page 42)

Above and alongside the plastic ceiling—directed against the flat white, real ceiling are located 150-200 watt floodlights, equipped with colored glass roundels in four colors, red, amber, blue and green. The floodlights are controlled through automatic dimmers which are set to give a complete color change every seven minutes. There are 12 work-lights, 100 watts each, used only for clean-up purposes and during relamping of the general lighting equipment.

In the ovals at the end of the lobby and above the molded lucite are located 36-100 watt reflectors which are equipped with amber colored roundels. The recessed spotlighting equipment on the Geary Street side and in the entrance to the mural dining room, is equipped with 100 watt lamps behind Century lenses and louvers. To light the long lobby are four modern chromium plated indirect floor lamps using 300 watts each. There is approximately 37 KW of connected load in lighting this room.

IMPROVED ENGINEERING DESIGN CUTS 'QUAKE INSURANCE

By HENRY F. BADGER

SOME years ago our old friend Dr. Bailey Willis, eminent Stanford geologist, in an address to insurance men, made an apt if somewhat facetious remark. He said that he thought that our buildings should be made so safe that we might invite our friends in the East to come out to California and enjoy our earthquakes with us.

Now, if I am correctly informed, the association of structural engineers is attempting to do that very thing—make our buildings safe. So I am particularly glad to encourage that work and to assure our structural engineers of the cooperation of the organized insurance interests, more particularly known as the Board of Fire Underwriters of the Pacific.

In the State of California, as well as in many other localities, history has proven that we may anticipate the occurrence of earthquakes at irregular intervals, of varying durations and intensities, and with resulting loss of life, destruction of physical properties, and embarrassment to business and our social well being.

During the last hundred years, twenty-seven earthquakes, any one of which was of sufficient intensity to cause serious loss of life and property, have occurred in California. Nevertheless it was not until 1925, following the Santa Barbara earthquake of that year, that serious thought was given by the Board of Fire Underwriters of the Pacific to the problem of setting up building standards as a stimulant to owners to build better buildings and to serve as a yardstick for estimating earthquake rates. This is comparatively a short period and one entirely inadequate to develop a comprehensive program of protection and insurance underwriting. Especially is this fact apparent when viewed from the standpoint of fire protection and fire prevention, the principles of which have been studied for centuries, and during which time insurance against damage by fire has advanced to its present high standing.

However, much has been accomplished, and if we are as interested in protecting our property from damage by seismic disturbances as we have been in providing safeguards against the fire hazard, we should, in the next few years, go a long way in solving some of the seemingly insurmountable difficulties. It is the purpose of these remarks to point out what the insurance companies are doing in this regard and, if possible, to further coordinate this work with the fine efforts being put forth by structural engineers, architects, and building officials.

NO ACTUAL 'QUAKE PREVENTATIVE FORMULA

Since there has been no formula discovered for preventing earthquakes, the question of reducing physical damage along with loss of life and inconvenience becomes primarily a problem of structural design. Therefore if we construct new buildings and strengthen existing ones so that they may resist a horizontal force of at least ten per cent of that due to gravity, and if we provide proper foundations for those buildings and protection against failure of tanks and other superstructures, not overlooking the proper design of water supplies and safeguards to the fire protection system, we have done about all that is humanly possible.

For buildings of moderate size and height the factor of ten per cent has been quite generally used and when applied effects a substantial degree of structural resistance to those lateral forces arising from earthquakes which may be anticipated in most areas in California. The record on the Pacific Coast justifies the assumption on which this factor is based, that except in few localities, earthquakes will not exceed a degree of intensity of 9 on the Rossi-Forel scale.

Without going into the details of earthquake resistance design, it may be assumed that the development of those details was largely a mathematical problem, whereas the establishment of an insurance rating schedule which would reflect earthquake resistive qualities as well as meet well grounded underwriting requirements was an entirely different matter.

* An address before the Structural Engineers of California.

Some of the underlying factors which makes the promulgation of equitable rates and rules for the writing of earthquake insurance difficult and complex are:

The level of rates must be largely hypothetical as the limited loss experience is entirely inadequate to serve as a basis;

Earthquakes frequently constitute a catastrophe hazard and when accompanied by conflagration, heavy fire losses must be assumed by those very same companies which are carrying earthquake insurance;

Small amount of insurance carried compared to the total value of all property subject to loss or damage by earthquake. In other words, the fundamental principle of underwriting, i.e., spread of liability, is totally lacking in earthquake insurance; furthermore the demand for earthquake insurance fluctuates widely.

Great variance of underwriting opinion as between the different carriers, coupled with a natural reluctance on the part of company executives to write earthquake insurance because of the uncertainties inherent therein and the difficulties of effecting satisfactory loss adjustments.

On the other hand, there are some factors favorable to the rating situation such as: No moral hazard to complicate the problem; character of the ground upon which a structure rests may be analyzed and definitely classified; fairly comprehensive information available defining geographical areas with regard to earthquakes, their frequency, and intensity; and accurate knowledge as to the behavior of different types of buildings when subject to earthquakes.

While the trend of fire insurance rates is distinctly parallel to the loss experience, it will be many years, if not centuries, before a sufficient number of earthquakes will have occurred to develop a loss experience which can serve as the basis for underwriting insurance and establishing earthquake rates. However, the experience already gained has permitted us to set up standards of construction for various types of structures together with rates on those structures which inherently or by classification reflect, at least relatively speaking, their probable behavior in an earthquake.

EARTHQUAKE AND INSURANCE RISKS

The Santa Barbara earthquake which was followed by an avalanche of applications for earthquake insurance, was the "go" signal for the Board of Fire Underwriters to set up its Earthquake Department. Much credit is due those men who were selected to chart the course of procedure in that wholly new underwriting.

Some thirty engineers and geologists were employed, headed by my old associate; Edwin W. Bannister, capably assisted by S. S. Gorman. These men were pioneers in this project. They did much research work, discussed their problems with eminent seismologists and examined literally thousands of buildings. The conclusions reached form the groundwork of the present rules and rating formulae of the Board of Fire Underwriters, the first and only really comprehensive earthquake insurance rating system ever developed.

So, as a member of the insurance fraternity, it is a pleasure for me to be able to say that in so far as earthquake rates are concerned, the credit for development of the present method of computing them belongs in a large measure to the structural engineers. If the level of these rates is not satisfactory, that is the fault of nature in not having provided sufficient earthquakes to afford adequate loss experience. But the relation of rates as between one type of building and another seems fairly well determined and is based mainly on the theory of structural engineering plus a little common sense in analyzing and assembling building materials.

In the time allotted it will be quite impossible to give any comprehensive outline of the voluminous rules and requirements governing these matters so, if you have a problem involving insurance, it is suggested that you apply to the Board of Fire Underwriters of the Pacific whose services are at your disposal.

However, a few examples of the application of the rules to actual risks should illustrate the importance of proper earthquake resistive design in the construction of buildings, at least from the standpoint of insurance costs.

Take for instance a very common type of structure—a three to five-story fire-resistive reinforced concrete building which might be occupied as a school, or office building or for light industrial purposes. Let us say the cost is $150,000 and that $100,000 earthquake insurance is carried according to average clause requirement with the mandatory 5 per cent deductible clause in the policy.

If the building were of the usual skeleton concrete frame with concrete floors and unit masonry filler walls without provision for lateral forces, the three-year rate would be 80c and the premium $800.

If this same building were provided with reinforced concrete walls, monolithic construction, although not specifically braced to resist earthquakes, the three-year rate would become 60c and the premium $600.

Now if the building were specifically designed to resist earthquakes according to the requirements of the Board, the rate might possibly be reduced to 25c, resulting in a premium for a three-year policy of $260, the extra $10 being the premium on the increased cost of the building due to the additional lateral reinforcement.

You will note that the annual saving in premium as between the first and the last illustration is about $180 which capitalized at 5 per cent amounts to $3,600.

Another popular type of building is the one-story market or garage of approximately 50 by 100 feet in size with wood or steel truss roof. Cost, $15,000.

If built of hollow tile bearing walls with no provision for lateral forces, the rate would be $5.00 for three years with 70% average clause and 15% deductible clause. Premium, $450.

This same building with solid unit masonry walls but no provision for earthquakes would rate $1.50 for three year term.

If of reinforced concrete, the rate would become $1.20. And if specifically designed to satisfactorily resist lateral forces, the rate under the same conditions but with a deductible clause of only 5% might be as low as 40c for three-year term. This would produce a premium of approximately $40 or less than 10% of the premium in the first instance.

EXAMPLE OF OFFICE BUILDING RISK

An interesting example is that of a specially designed office building for a large public utility. Let us assume that the structure cost $1,000,000 and that 70% insurance to value is carried with the 5% deductible. The resulting three-year premium at the three-year rate of 30c is $2,000. This premium would have been more than doubled if the design had simply met the requirement of the old building code of the city in which the risk is located.

All of the above rates except those applying to the specially designed earthquake resistive types of building would be subject to a 25% increase if located on filled ground.

There might be other features such as unbraced tanks on roof, large auditoriums, extensive embellishment, etc., which, as well as the location of the risk itself, would affect the final rates unfavorably.

In the examples which have been considered, you will note that no mention has been made of wood frame structures. Fortunately for the owners and occupants, frame buildings of three stories or less and not exceeding 3,000 sq. ft. area and located on firm natural ground behave comparatively well in moderate earthquakes. But unfortunately for the insurance companies they burn readily, and therefore this type of construction except in uncongested areas cannot be recommended.

The ordinary brick-joisted building often constitutes a serious earthquake hazard. But frequently it can be greatly improved and safeguarded by the installation of lateral reinforcement. It is this type of building to which particular attention should be given as there are thousands of them in the state, many potentially unsafe and all more or less conflagration-breeders.

The very important subject of Use & Occupancy or Business Interruption insurance should not be overlooked in a discussion of this kind. Structural safety appears to be even more important to an owner than insurance when it comes to business interruptions. It does not take a very serious earthquake to put a plant temporarily out of commission and while Use & Occupancy insurance may indemnify the owner to the extent of his actual loss, due to business interruption, it never fully compensates him. When an earthquake strikes, the business of an entire community may be temporarily interrupted, if not destroyed, and the man who can open up his store or shop next morning because he has provided earthquake protection is in a preferential position as compared with the individual who has only insurance on which to depend. Similar rating credits for good construction apply to insurance covering business interruption as apply to physical damage.

When considering the premium costs for various types of buildings, the fact must not be overlooked that the rates upon which the premiums are based are always subject to change. Unlike fire rates, they have little or no actual basis and to that extent are less stable. However, there is good reason to believe that the differentials in rates between ordinary buildings and well designed buildings will remain relatively constant. So to that extent the examples presented have a definite value. As a matter of fact, the three or four earthquakes which have occurred since the adoption of the rating methods now in use have tended to confirm the theories on which the methods are based.

While a good deal has been said as to how to improve a risk and thereby reduce a rate, it is not the purpose of this paper to convey the thought that we desire to stimulate or encourage the purchase of earthquake insurance. In the first place, the market for this type of insurance is limited, and following an important earthquake it is conceivable that adequate amounts of earthquake insurance would be unobtainable. The problem really becomes a matter of public safety rather than of indemnity, and I believe the structural engineers can be of great service in encouraging proper design of buildings more from the standpoint of the public weal than because of resulting rate reduction. You must not overlook the fact that fire insurance companies carry most of the earthquake insurance so that they have a double responsibility when a serious earthquake with accompanying conflagration occurs.

In the past, insurance companies have recognized a certain responsibility—they have responded to the demands for earthquake insurance made upon them, frequently up to their carrying capacity. But there are underwriting limitations which if exceeded might imperil their solvency, and this responsibility to the public—the responsibility of maintaining their financial integrity—outweighs all others.

The obvious answer to this contradictory situation is simply this: build earthquake resistive structures. And this applies more to the hospital, school, factory, office building, apartment and warehouse, whose owners are usually financially able to pay the extra cost of reinforcement, than to the dwelling house, small store and shop, whose owners are not so favorably placed and for that very reason need insurance. Such a program if carried out would have a three-fold effect: it would make more certain the uninterrupted flow of business, it would reduce the catastrophe-hazard, and it would permit a wider spread of insurance by reducing the need and therefore the demand on high-valued earthquake-resistive risks.

In conclusion, may I express the hope that these few words and the discussion to follow will tend to stimulate renewed interest in this fight for protection against earthquakes.

We must not lose sight of the fact that there are billions of dollars of insurable values alone in the two great metropolitan areas of California, totally uninsured as to earthquakes, but all more or less simultaneously subject to damage by them. These very same values are or can be largely protected by insurance from

SLUM CLEARANCE BOOSTS BUILDING VOLUME FOR JANUARY

"Architects' Reports," a daily building news service sponsored by the State Association of California Architects, and published by **Architect and Engineer,** gave to its subscribers in January news of projected buildings for which plans were in preparation of a total value of $6,843,500, an increase of more than $3,000,000 under the same classification in December. Items covered included residences, city, county and State buildings, Federal buildings, schools and colleges, theaters, clubs and hospitals, stores and markets, and industrial work. The big increase was due to an estimated expenditure for apartments under the Federal Slum Clearance Act of $2,340,000.

Projects reported "out for bids" during January totalled $25,282,739, an increase of more than $10,000,000 over December. Again the big item was for Federal work, a matter of $23,834,862 for government buildings. The grand building total for the month for all classifications was $39,014,298. Summary:

Plans in Preparation, January 1940

Apartments	$2,340,000	
Residences	146,500	
City, County and State	472,000	
Government	50,000	
Schools and Colleges	2,118,000	
Theaters, Hotels, etc.	827,000	
Office Buildings	190,000	
Stores and Markets	420,000	
Industrial	280,000	
		$ 6,843,500

Projects Out For Bids, But Not Awarded

Apartments	43,000	
Residences	62,922	
City, County and State	778,305	
Government	23,824,862	
Schools and Colleges	214,805	
Theaters, Churches, etc.	175,845	
Office Buildings	40,000	
Stores and Markets	103,000	
Industrial	40,000	
		25,282,739

Contracts Awarded

Apartments	1,535,090	
Residences	235,000	
City, County and State	590,478	
Government	2,300,052	
Schools and Colleges	94,211	
Theaters, Hotels, etc.	276,929	
Office Buildings	780,688	
Stores and Markets	520,580	
Industrial	555,031	
		6,888,059
		$39,014,298

EARTHQUAKE INSURANCE

losses by fire because they are not all subject at one time to damage from that cause. In other words the fire risk in these two great metropolitan areas has been broken up into many risks not subject to the same fire, by the establishment of clear spaces between buildings, construction of fire walls and the maintenance of efficient fire protection systems. Insurance companies therefore can assume liability against fire in these areas without serious underwriting difficulties.

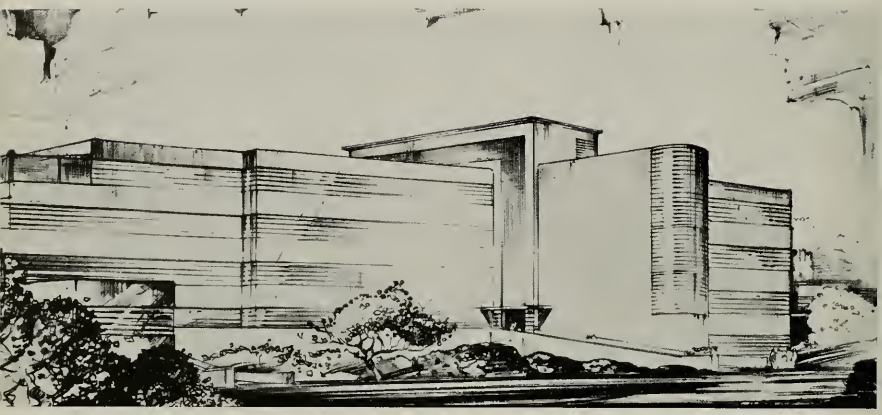
But earthquakes are no respectors of fire walls—they literally cut across fire barriers and laugh at fire departments—they may at one swoop lay waste an entire community or several of them.

To provide complete insurance against such a contingency would be next to impossible. The solution—the only solution—is superior building construction. Let us not await the occurrence of another earthquake to arouse us to further action in the way of enactment or enforcement of sound building codes and the improvement of existing structures.

LICENSE FEE

San Francisco Architects, together with other professional and business firms, have been relieved of the delinquent license tax burden by action of the supervisors in repealing the tax ordinance over Mayor Rossi's veto. The question of a fair license tax will now arise, and the Association will be required to watch developments in this matter. A tax based on gross income would be inequitable and impractical.

PSYCHIATRIC CLINIC AT U. C. HOSPITAL



Courtesy California Public Works

THE perspective sketch shows in tentative form the general mass of a design by the California State Department of Architecture for a modern psychiatric clinic unit to the University of California Hospital and Medical School in San Francisco. An appropriation of $500,000 is available for the structure which will be four stories and constructed of reinforced concrete and glass brick.

Additional area for necessary service units and storage will occupy a partial basement. The elevator pent house, living quarters for residential physicians and other minor elements, will be housed in a central fifth floor unit.

The plan form is that of an unsymmetrical "T." Two garden areas occupy the space on either side of the stem of the "T," one giving special interest as an entrance feature exposed to the view of the main street, and the other a secluded area protected from the public view to provide outdoor recreation area for patients under treatment and observation.

The first floor will be given primarily to the outpatient department, administrative offices, receiving unit, laboratories, and lecture room.

The principal areas on the second, third, and fourth floors are devoted to housing approximately 100 patients divided equally between the sexes. Distinct separation of sexes is provided, except in the neurosurgical and the children's wards.

On the extreme front wing of these three upper floors are specialized units including: (1) Facilities for insulin shock therapy, a treatment giving excellent promise in the cure of cases not too far advanced; (2) a complete neuro-surgical unit with operating room, X-ray, and related accessories to care for all surgery of the brain and the nervous system; (3) occupational therapy rooms devoted to craft work designed to occupy the mind, develop coordination of faculties, and otherwise improve the general mental condition.

The new clinic is intentionally limited in size, being considered not as a basic treatment unit, but as a center from which will be directed an increasingly broader program of practical applied psychiatry to be carried out by the various institutions already in existence.

Acoustic materials will be used extensively to minimize noise disturbances. Adequate natural light and ventilation will be available generally through the generous window area characteristic of the modern architectural treatment.

HEATING AND VENTILATING EXPOSITION

Marking a highpoint in a successful series, the Sixth International Heating and Ventilating Exposition was held during the week of January 22nd to 26th, at Lakeside Hall, Cleveland. More than 300 leading manufacturers presented comprehensive displays of the latest air conditioning equipment and accessories, making this the largest exposition of its kind ever held. An enthusiastic audience totaling nearly 25,000 visitors came from all parts of the United States and from many foreign countries to see this unusual review of engineering advance. Keen buying interest was evidenced and exhibitors made many actual sales during the Exposition.

The show, otherwise known as the Air Conditioning Exposition, was held under the auspices of the American Society of Heating and Ventilating Engineers, who, following an established custom, held their annual meeting during Exposition week. Meeting also in Cleveland was the National Warm Air Heating and Air Conditioning Association.

The Exposition was under the personal direction of Charles F. Roth.

With the Architects

NEEDS A. & E. IN HIS PRACTICE

Editor, Architect and Engineer:

Enclosed find money order for the amount of $3.00 for which please credit my account for one year's subscription to Architect and Engineer.

I first came in contact with your wonderful architect's magazine when I was an engineering student at Southwestern La. Inst., Lafayette, La. I am glad to have it now as a help and a reference to my business.

Thanking you and with best regards, I remain,

Sincerely yours,

CHARLES J. WALL.

Lake Charles, La.
Feb. 1, 1940.

NORTHERN CHAPTER RETAINS '39 OFFICERS

Northern California Chapter, American Institute of Architects, met at the St. Francis Yacht Club Tuesday evening, January 30, for the annual election of officers.

James H. Mitchell was re-elected president. Wm. Wilson Wurster and John Davis Young were respectively re-elected vice-president and secretary-treasurer.

Directors for the year are A. Appleton, Chester H. Miller, Warren C. Perry and Ernest W. Weihe.

WASHINGTON STATE SOCIETY

Harry E. Hudson, architect of Seattle, is the new president of the Washington State Society of Architects. Stanley A. Smith of Pullman, and Oscar F. Nelson, Bellingham, are this year's vice-presidents. Fred J. Rogers, Seattle, is secretary and John E. Kelly, Jr., treasurer. Walter C. Jackson, R. C. Stanley and A. B. Cornelius, all of Seattle, comprise the board of trustees.

MOVING PICTURE THEATERS

Plans have been completed for two new motion picture theaters, one to be built in San Leandro, from plans by A. A. Cantin, architect of San Francisco, and the other in Turlock, from plans by O. E. Deichmann and Mark Jorgensen. Both houses are for the Golden State Theaters, Inc.

MASONIC TEMPLE ADDITION

More than $80,000 will be expended on alterations and additions to the Masonic Temple at 2668 Mission Street, San Francisco, from plans by Architect F. Frederic Amandes, 414 Dewey Boulevard, San Francisco.

AUTO SALES BUILDING

Contracts have been awarded for a $35,000 auto sales and service building for the Smallcomb Chevrolet Company in San Mateo, from plans by Oscar R. Thayer, 1259 Cabrillo Avenue, Burlingame.

OREGON CHAPTER ANNUAL DINNER

Oregon Chapter, A.I.A., held its annual dinner meeting January 23, in the Pompeian Room, Congress Hotel, Portland. Robert K. Fuller, architect of Denver, Colorado, Western Mountain States regional director, was guest of honor and made the principal address.

At the business meeting which preceded the dinner, the following officers were elected, some of them succeeding themselves because of satisfactory service: President, A. Glenn Stanton; vice president, Pietro Belluschi; secretary, Ernest Tucker, of Tucker and Wallman, 1938 N. W. Irving Street; treasurer, Francis B. Jacobberger; trustees, Roi L. Morin, John Schneider, and Leslie D. Howell.

Miss Aimee Gorham was honored by election to honorary membership and presented with a certificate of merit by the Chapter in recognition of her artistry and craftmanship in the design of mosaic wood murals. She did the mural in the state dining room of the Federal Building at the New York World Fair.

SANTA MARIA ARCHITECT'S OFFICE

Louis N. Crawford, for many years a practicing architect in Santa Maria, has for some time been confined to his home by illness but the work of his office is being successfully carried on by Paul O. Davis, formerly of Los Angeles. Phil Daniels is also in the same office which at the moment is busy on plans for new library in Santa Maria.

PERSONAL

Reddick H. Bickel, architect, announces the removal of his office from the Mutual Bank Building, San Francisco, to the seventeenth floor of the Humboldt Building, 785 Market Street, San Francisco.

John J. Donovan, architect, departs the end of this month for an extended trip east. He will visit all the metropolitan cities, including Chicago, New York, Boston and Philadelphia, and will be away until April.

ALBERT FARR BETTER

Albert Farr, architect, senior member of the firm of Farr and Ward, Foxcroft Building, San Francisco, has entirely recovered from his recent illness and is as active as ever in the practice of his profession.

TWO HIGH CLASS HOMES

Two residences shortly to be started in San Mateo County are being designed in the office of Harry A. Thomsen, architect, of San Francisco. They will cost approximately $50,000 each.

SAN FRANCISCO SECTION A.S.C.E.

The next regular bi-monthly meeting of the San Francisco Section, American Society of Civil Engineers will be held in the Engineers Club, San Francisco, on Tuesday evening, February 20. The guest speaker will

HAROLD B. HAMMILL, PRESIDENT S. F. SECTION A. S. C. E.

be Dr. Stephen P. Timoshenko of Stanford University who will deliver an illustrated talk on "European Research Laboratories of Engineering Mechanics."

One of the most active committees of the San Francisco Section is the "Soil Mechanics and Foundation" committee of which Theo. P. Dresser, Jr. is chairman.

A member of the Section, Charles H. Lee, was recently awarded the Norman medal for his paper entitled "Selection of Material for Rolled-Fill Earth Dams." This is the highest honor awarded by the National American Society of Civil Engineers.

Lloyd T. McAfee, also a member of the section, was recently rewarded for his long and successful career with the City and County of San Francisco by appointment to the position of manager and chief engineer of the Hetch Hetchy Water Supply, Power and Utilities Engineering Bureau, City and County of San Francisco.

STRUCTURAL ENGINEERS' 1940 WORKERS

The Stuctural Engineers Association of Northern California, has selected the following standing committees for the current year:

Advisory Committee
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Present Directors (ex-officio)
All Committee Chairmen
Past Directors

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C. E. Seage, Vice-Chairman
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J. H. Hjul
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J. E. Mackie

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H. Rosenthal, Vice-Chairman
L. Graham, Secretary
W. Adrian
H. M. Engle
Milo S. Farwell
J. R. Fox
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J. A. Paquette
Jesse Rosenwald

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Jesse Rosenwald, Vice-Chmn.
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H. J. Brunnier
W. L. Huber
W. G. Corlett
L. H. Nishkian

WASHINGTON STATE CHAPTER

At the annual meeting, January 20, of Washington State Chapter, A. I. A., the following officers were elected:

President, Floyd A. Naramore, Seattle; first vice-president, William J. Bain, Seattle; second vice-president, George Gove, Tacoma; third vice-president, Henry C. Bertelsen, Spokane; secretary, Victor N. J. Jones; treasurer, Clyde Grainger; member of the executive board for three years, William Aitken.

Robert K. Fuller, regional director, Western Mountain District, A. I. A., was among the prominent guests. At the dinner which followed the business meeting, addresses were made by President Naramore, Regional Director Fuller and President William F. Gardiner of the Architectural Institute of British Columbia, followed by entertainment and dancing.

The University of Washington School of Architecture held open house and an exhibition at which quite a few Chapter members and associates were present.

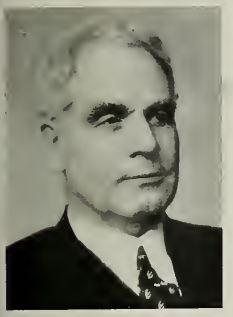
Chapter members are still reminiscing on the enjoyable Christmas party at the home of Mr. and Mrs. Wm. J. Bain, December 20. A fine home-cooked turkey dinner, followed by games and music, made the evening pass much too quickly. The Bains are indeed a most hospitable couple.

FRANCIS J. PLYM, ARCHITECT, PHILANTHROPIST

Francis J. Plym, architect, philanthropist, founder and principal owner of the Kawneer Company of Niles, Michigan and Berkeley, California, passed away unexpectedly at his home in Niles, January 12, aged 71. Kawneer metal store fronts of which Mr. Plym was the inventor (from 1906 up to last year more than 125 patents, covering trade marks, designs and inventions were issued to his company) are known and used extensively throughout the United States and abroad.

Graduated from the University of Illinois in 1897 with the degree of bachelor of science in architecture, Mr. Plym later studied in the National Academy of Design in New York.

He began his career as an architect in Lincoln, Neb., in 1899, then moved to Kansas City where he practiced until 1907.



FRANCIS J. PLYM
ARCHITECT
AND FOUNDER OF
KAWNEER CO.,
OF NILES,
MICHIGAN AND
BERKELEY,
CALIFORNIA

As an architect he found a growing need for metal store fronts. He invented and installed in the Frank Johnson general store in Holdredge, Neb., a new mechanical setting especially adapted to resist strain and atmospheric changes. It was the first construction of what is now known as the Kawneer type.

The first small Kawneer company was organized in Kansas City in 1906. Its name was derived from the Kaw River, near which the Plyms' home was located.

Looking about for a small city in which to locate his factory, Mr. Plym received an offer from some of the citizens of Niles who were interested in the city's commercial welfare and offered to build a small factory if the Kawneer would move to Niles.

One condition of the offer was that the payroll would equal $100,000 during the first five years. In two years the payroll exceeded that sum.

Eager to share with the city of their adoption some of the benefits received from a successful industrial enterprise, Mr. and Mrs. Plym presented to the city of Niles the 67-acre tract now known as Plym park.

Later he built and presented to the city Pawating Hospital at a cost of $100,000.

To encourage youth in the architectural field, Mr. Plym had for years given two scholarships annually to students in the University of Illinois—one to an outstanding student in the department of architectural design, another to one in the department of architectural engineering. Both provide for one year of study and research abroad. The fund which was recently raised from $46,000 to $60,000 also supplies other benefits to students who submit the best papers and designs.

In his later years Mr. Plym received many honors for the work he had done in the educational and industrial fields and for his successful direction of American-Swedish Tercentenary in 1938.

In that year the King of Sweden conferred upon him the Order of Vassa, the highest honor bestowed upon those who have given distinguished service.

In the same year Augustana College at Rock Island, Ill., conferred upon him the degree of Doctor of Laws, and the Illinois Society of Architects in 1938 made him an honorary member.

Mr. Plym was interested in every phase of architecture and building and enjoyed nothing more than a set of blue prints, suggesting changes here and there and viewing it from the standpoints of the builder and the artist.

He was a member of the American Institute of Architects, the Illinois Society of Architects and various civic organizations, fraternities and clubs.

JAMIESON PARKER, ARCHITECT

Jamieson Parker, state FHA director for Oregon and past president of the Oregon Chapter, A.I.A., died Friday, December 8, following a month's illness. Mr. Parker, a native of Portland, was 45. Graduating from the University of Pennsylvania in 1916, he began his professional architectural practice in Portland, and won general recognition. During the World War he served in the U. S. Army as a second lieutenant of coast artillery.

In January, 1934, Mr. Parker was appointed district officer for Oregon and Washington for the survey of historic buildings, sponsored by the Federal Department of the Interior. Later he became executive assistant to Edgar Freed, FHA director for Oregon. In December, 1934, he was advanced to associate director and at the time of his death was in full charge of the bureau.

RECOGNITION FOR NOTRE DAME

Five University of Notre Dame students of architecture have won mentions in a design competition sponsored by the Beaux Arts Institute of Design in New York City. Richard Whalen, a sophomore from Yonkers, New York, was awarded first prize. The problem was a design for a sea-shore restaurant.

The following Notre Dame students submitting designs for this problem, won mentions: Douglas Haley, Vallejo, California; John W. McHugh, Springfield, Ohio; Robert A. Nolan, Louisville, Kentucky, and Milton Paskin, South Bend, Indiana.

COAST ARCHITECTS TO SEE NAIRN MODES AND METHODS SHOW

FEATURED in the 1940 edition of the Modes and Methods Show which Congoleum-Nairn, Inc., are bringing to the Coast, are complete model rooms, a section on the use of "Personal-ized Floors" and Nairn wall linoleum, Nairn Adhesive Sealex linoleum, and Nairn Treadlite linoleum. Another feature of the show is a series of "evolution" displays demonstrating the correct installation for various types of floors and walls. This is augmented by a motion picture illustrating the application of linoleum to ceilings, walls, floors and sink tops.

Some of the full-scale construction models to be shown are illustrated here.

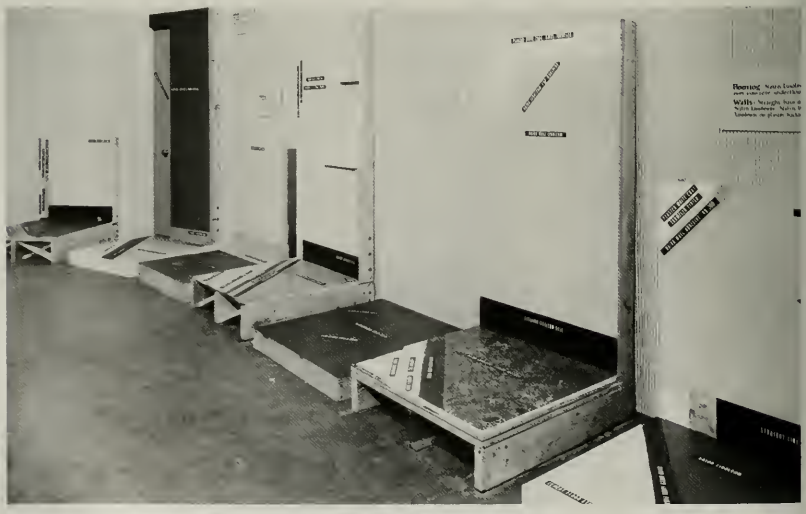
On its tour of nineteen major cities in the East and Midwest, the Modes and Methods Show was well received by architects and the various building industry groups. Michigan Society of Architects comments in part, in their Weekly Bulletin: "The Exhibition is on a very high plane and no selling is undertaken. Instead, the aims are purely educational . . . the sponsors are doing the next best thing to taking their guests on a tour through their factory. The show is the highest grade piece of educational merchandising we have ever seen."

A ten days showing in Los Angeles, ending February 23, will be followed by a like period in San Francisco, commencing February 27 and ending March 7.

An architects dinner presentation of the show will be held in San Francisco the evening of Friday, March 1st in the auditorium of the Furniture Exchange, Tenth and Market Streets.

After leaving San Francisco, the itinerary will be: Portland, March 12-15; Seattle, March 18-22; Spokane, March 26-29; Salt Lake City, April 3-6; Denver, April 10-13.

MODEL BATH WITH LINOLEUM WALLS AND FLOORS



FULL SCALE CONSTRUCTION MODELS WILL FEATURE TRAVELING EXHIBIT

GLAZED TILE USED TO REDRESS FRONT OF HOTEL

REMODELLED, THE HILTON HOTEL, LONG BEACH, CALIFORNIA, PRESENTS CERAMIC FACING ALONG ITS ENTIRE GROUND FLOOR FRONT, FORMING A BASE ARCHITECTURALLY FOR THE MASSIVE STRUCTURE, AND ADDING COLOR, DURABILITY, AND EASE OF CLEANSING FOR THE STORE-FRONTS AT STREET LEVEL. THE KRAFTILE GLAZED CERAMIC FACING IS OF GOLDEN BROWN AND BUFF MOTTLE, THE ASHLAR UNITS HAVING A FACE SIZE OF 12″x18″. WILBUR D. PEUGH, ARCHITECT; CAHILL BROS., CONTRACTORS.

DETAIL OF COFFEE SHOP FRONT

AIR CONDITIONING PLANT IN AGAIN, ON AGAIN, OFF AGAIN

The largest air conditioning moving job ever attempted in the history of the industry is under way at a 117-year-old building in Philadelphia, occupied by a women's store.

More than 20,000 pounds of air conditioning equipment is being moved to a temporary home for the store. After a new building is constructed on the site of the present store, the system will be reinstalled in the modern structure.

The undertaking means moving and reinstalling, twice, a system designed to handle 45 tons of air per hour. Four two-horsepower fan units, 40 horsepower refrigeration equipment, hundreds of feet of copper tubing, electrical conduits, water piping, compressors, air conditioning units on four floors and other odds and ends are being taken down piece by piece to be reassembled in the temporary quarters, later on to again be dismantled and installed in the new building.

SLUM CLEARANCE PROVIDES WORK FOR MANY

Jobs at prevailing wages will be provided for more than half a million workers as one of the major economic benefits of the present $770,000,000 nation-wide slum clearance and low-rent public housing program, it is estimated by the United States Housing Authority.

Approximately $225,000,000 will go into the pay envelopes of 510,000 construction engineers, building trades mechanics, laborers, and clerical workers engaged directly on the sites of USHA-aided projects designed to rehouse approximately 160,000 low-income families removed from substandard shacks and shanties in the nation's blighted areas.

In addition to wages paid to workers on the sites, as shown by the analysis, there will be an estimated $280,000,000 paid for construction materials. A large part of these funds will be turned into wages for an additional 185,000 workers employed in factories, mills and on common carriers transporting the materials to the project sites.

Another major item of the public housing program is the funds expended in the acquisition and clearing of land for the projects which will reach an estimated total of $109,000,000.

These three major expenditures of the USHA program represent an estimated contribution of more than $610,000,000 toward the stimulation of local and national economic activity.

The other items of development cost included in the $770,000,000 total for the program are architectural service, preoccupancy expense, administrative expense, carrying charges, and contractors' overhead and profit.

The analysis of employment, which will total 510,000 jobs at wages approximating $225,000,000, shows:

Skilled labor will receive a total of about 245,000 jobs, with wages aggregating approximately $138,800,000.

Jobs for unskilled helpers and laborers will total about 244,000 with total wages of about $67,700,000.

Approximately 21,000 administrative, professional, technical and other white-collar workers will be employed at salaries totaling around $18,500,000.

A breakdown giving the estimated distribution of employment follows:

Skilled Labor	Man Hours	Wages
Bricklayers	16,000,000	$ 23,900,000
Carpenters	32,500,000	41,900,000
Cement Finishers	4,800,000	6,100,000
Electrical Workers	4,200,000	6,900,000
Glaziers	900,000	1,300,000
Installers	100,000	100,000
Insulators	1,600,000	2,000,000
Iron Workers	2,500,000	3,400,000
Lathers	3,500,000	5,300,000
Miscellaneous	900,000	1,100,000
Operators	3,400,000	3,100,000
Painters	9,600,000	11,500,000
Plasterers	7,800,000	11,200,000
Plumbers	9,300,000	13,400,000
Roofers	1,100,000	1,500,000
Steamfitters	2,300,000	3,300,000
Sheet Metal Workers	1,000,000	1,400,000
Stone Workers	100,000	300,000
Tile Layers	700,000	1,100,000
Total for Skilled Labor	102,300,000	$138,800,000
Total for Unskilled Helpers and Laborers	106,700,000	67,700,000
Total for Contractors' Administrative, Professional, and Technical	21,000,000	18,500,000
Totals	230,000,000	$225,000,000

ADDITION TO COURT HOUSE

George C. Sellon, architect in Sacramento, is preparing working drawings for a $60,000 addition to the Placer County Court House at Auburn. The three-story structure will serve as a jail and sheriff's quarters.

BRANCH BANK BUILDING

A one-story reinforced concrete branch bank building is under construction at San Bruno for the Bank of America, from plans by L. J. Hendy.

SAUSALITO FIREHOUSE

Plans have been completed in the office of Norman W. Sexton, de Young Building, San Francisco, for a two-story frame and stucco firehouse for the City of Sausalito. Estimated cost $15,000.

ARCHITECTS' BULLETIN

Issued For

THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

Northern Section

STATE ASSOCIATION MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

Editor
Harris C. Allen

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PUBLIC INFORMATION

THE old problem of getting proper and adequate publicity for architecture and architects is like the poor—always with us. From a recent issue of the Weekly Bulletin of the Michigan Society of Architects we reprint, below, the summary of a program prepared by Mr. D. Knickerbocker Boyd, which certainly puts the burden of responsibility upon the profession itself. It will be noted that some of the proposed activities have already been adopted in this district.

SUMMARY OF A PROGRAM OF PUBLIC RELATIONS

A group of individuals in the Philadelphia Chapter of the American Institute of Architects, believing that some better means than any now existing must be found for establishing a closer understanding and relationship between architects and their prospective clients, has asked the writer to present a program of activities calculated to bring about such results.

The public, this group asserts, invests its money in the products of the knowledge, skill and experience of reliable architects, engineers, manufacturers and builders and should have a better knowledge of the advantages and economies resulting from their employment.

The suggestions for activities which follow, however, are tentative and incomplete. They are all subject to editorial revision and will be added to from time to time. It will be noted that some of them indicate the possibility of best accomplishment through participation by chapters and state associations on a national basis. The remainder are offered as recommendations for local activities. It is obvious that some of them are more suitable to one locality than another. Furthermore some of them are already under way. When successful, the ideas should be relayed to other groups with details for possible adoption.

A. National Activities

1. The public still needs to be much more fully informed as to the services which the competent architects perform and as to their co-operation with good engineers and reliable contractors, sub-contractors and the manufacturers of quality materials. To this end appropriate documents in language for popular consumption should be prepared and widely distributed in the form of brochures.

(a) One should be prepared for local use and national distribution to financial institutions, insurance companies, corporations and others, who should much more extensively employ competent architects, engineers and builders and use quality materials.

(b) Another should be prepared for popular consumption by prospective home owners and for distribution at exhibitions, "home shows," etc.

(c) Another could consist of authoritative information on maintenance and proper upkeep of buildings for distribution by architects to owners for whom buildings have been satisfactorily completed under architectural services.

(d) Still another could show illustrations and text, examples of advertising in popular magazines and trade publications by national manufacturers of building materials and equipment, of how they advocate the employment of trained architects in connection with all building matters. A campaign has already been started to bring this about and to urge others to follow suit.

2. The professions should, collectively and individually and impressively, collaborate with all local officials and civic organizations, as the Institute does nationally. The necessity for these activities could not better be described than in the report of the A. I. A. Committee on State and Municipal Public Works as presented at the 1939 Convention, which every member of the profession should read; copies of which may be obtained by applying to The Octagon.

3. Collectively we should urge the U. S. Postal Department to issue a series of postage stamps showing the tangible assets of the government—(not now recognized as offsets to the so-called "enormous" national debt)—including good examples of architecture, engineering and construction—with portraits or the names of the architects, and in some cases of the engineers and contractors.

4. Require, through adequate means, that names of architects and engineers be given in connection with illustrations of buildings—and builders too, after contract awards—in newspapers and other publications. The public, as well as the industry, has a legitimate interest in being given this information.

5. All over the country illustrated postcards are put out of prominent buildings which, in almost all cases, neglect to mention the name of the architect—and the builder. Efforts to rectify this omission should be made with all publishers of such cards and of illustrated booklets decriptive of buildings in communities and with the promoters of all tours, sight-seeing buses, etc. Cooperation could also be offered in compiling information.

6. Arrangements could be made for a series of cards, attractively illustrated and lettered, depicting historic buildings and shrines of architectural merit. Beginning with The Octagon, as headquarters, each one should bear the name of the American Institute of Architects. They could be furnished to architects of the country and others at a reasonable price for use at Christmas and on other occasions. This would fill a long felt artistic need and their distribution by hundreds of thousands would insure a profit to the Institute and be an excellent means of promotion.

7. In addition to local exhibits of architecture, arrangements from time to time can be made with the American Federation of Art or the new National Museum for traveling exhibits of architecture. With the same kind of "publicity" as later mentioned for local exhibits, these can do much to arouse public interest in the profession and in building construction.

8. The promotion of certain phases of the building industry through motion pictures and on the radio is being handled by many individual manufacturing concerns and by associations and by the Producers' Council. The use of these media should be promoted in every way possible before the public, before clubs, and before architectural and engineering schools. Others should be encouraged to add to this list of available motion pictures and radio programs. All possible co-operation should be secured in arranging for listeners, showings and adequate attendance.

9. Due to the possibility of there being too few building trades workers in the near future, it is suggested that adult classes or lectures be conducted on every phase of the building industry, including respectively real estate, architecture, engineering, contracting, manufacturing, erection and installation. Such courses could be conducted by the combined associations in the industry and consist either of short or concentrated periods. To these would be invited all local elements in the industry, including workers, especially those who, due to lack of employment, are now out of the industry and occupying positions as chauffeurs, barbers, bartenders, filling station agents, etc. The co-operation of Federal and local agencies can be readily obtained if an organized attempt be made.

10. Failure to bring this latter class of men back into the industry in time to revive their interest and technique would then be the occasion to consider the other possibility, that of co-operation with local boards of education, and industry associations, the Federal Apprenticeship Committee, and labor organizations, in establishing any necessary apprenticeship courses.

B. Local Activities

1. The professions should collaborate with boards of education in maintaining highest standards of planning and designing of school buildings, and also:

(a) Arrange for traveling exhibitions of selected architectural subjects into the public and parochial schools with a speaker at the opening exercises in each school. Presumably the exhibit would change schools every week.

(b) Present once each year (or oftener) a framed example of some fine piece of architecture (ancient or modern) to one of the schools with an architect making the address of presentation at a suitable ceremony, assembling all pupils.

(c) Provide for talks on the "Romance of Building" before general assemblies of scholars as an adjunct to vocational guidance in the interest of the building crafts.

(d) Where vocational courses are conducted in the building trades, Chapters or State Societies could

well offer to furnish school authorities with blueprints of appropriate buildings for instructional purposes. Also arrange for a separate exhibit of working and detail drawings with accompanying photographs of the executed work, and possibly an occasional talk by an architect, engineer, or builder to the boys.

2. Arrange for talks by professional men, builders, and material manufacturers before Rotary, Exchange and other Service Clubs. Also before Women's Clubs and other organizations.

3. Arrange similar interchange of ideas and promotion of each other's interests at meetings of builders' exchanges, real estate boards, building and loan associations, other financial groups and interests, building owners and managers' organizations, and others allied with construction.

4. In co-operation with building materials exhibits, wherever they exist, assist in maintaining a bureau of information on architectural and technical subjects and keep such a bureau or library supplied with literature on the services of the architect for distribution to the public.

5. Maintain an informational exchange to keep members of all organizations allied with architecture and construction advised as to meetings and speakers where the subject may be of interest to others than the immediate membership.

6. Chapters or Societies could prepare maps showing locations of buildings in each city or community, for display in railroad and bus stations and all other prominent places—for the information of visitors—possibly in co-operation with civic groups and with the names of the organizations conspicuously displayed.

7. Assist in compiling booklets by Chambers of Commerce and other agencies in exploiting the advantages of communities, and of architects' services and the characteristics of their buildings, and of local construction facilities.

8. Co-operate in compiling data on historic buildings and objects of interest in each community or state and in bringing about their preservation wherever desirable.

9. Arrange for periodic exhibits of architecture and allied arts. Preferably to be held in conveniently conspicuous places and accompanied by campaigns of publicity and promotion in the press and by posters, radio and otherwise, including addresses in the schools, notices in motion picture shows, etc.

10. Where home shows are held, if possible exert architectural influence and direction, include architectural exhibits and arrange for distribution of specialized brochure intended for guidance of prospective home owners.

11. Give official recognition to good craftsmanship. Wherever possible award certificates of craftsmanship to outstandingly good workers, as now being done in New York and other places usually through building congresses. Encourage good craftsmen, through individual commendation, on all occasions possible.

12. Encourage draftsmen to visit quarries, mills and buildings under construction and familiarize themselves with all phases of construction possible outside of the office routine.

13. Organize building congresses, representative of all elements in the construction industry, where they do not now exist. Consult A. I. A. Committee on Industrial Relations, for details on procedure.

14. Encourage local representatives of manufacturers of building materials, equipment and devices, affiliated with the National Producers' Council to set up local organizations.

15. Arrange wherever possible for radio talks about the professions and the building industry. The co-operation of producers may be secured for information on their national programs.

16. Wherever Better Homes committees exist in communities, it is suggested that architects, producers and builders should collaborate with the public spirited citizens who are functioning to arouse public interest in better homes and more of them.

17. Co-operation with Chambers of Commerce, touring agencies and conductors of "rubber-neck" vehicles, should be furnished as to note-worthy places of architectural, structural, or historic interest and information furnished as to the general type of design, materials used, architects', engineers', and builders' names, etc.

18. In communities where lists of principal buildings, together with the names of owners, architects, engineers, builders and general characteristics are not obtainable, newspapers will welcome such authoritative information for prompt use in preparing descriptions or news items, especially in the case of accidents, fires or other casualties.

19. While newspaper offices maintain "morgues" in their libraries of principal personalities connected with the building industry, it is suggested that local organizations secure complete biographies of local persons, lists of buildings designed, or executed, and other pertinent data subject to call or to be furnished newspapers, magazines and other publications when occasions present themselves.

20. In some cities local organizations of architects make honor awards to owners of buildings, and sometimes architects, for excellence of design and construction, which activity assists in attracting public attention to architects and the building industry. These are sometimes individual buildings wherever located and in other instances are for the most attractive buildings on certain streets. Instances are Fifth Avenue in New York City, and Chestnut Street, Philadelphia, for which award announcements have recently been made.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

338. G. F. PRODUCTS

The General Fireproofing Company has issued its 1940 Anniversary Edition of "The GF News." This little paper contains information concerning this company's products almost entirely in picture form. It is a rather unique method of inducing sales interest. The coupon below will bring your copy.

339. DISAPPEARING DOORS

A broadside describing and picturing disappearing doors manufactured by E. C. Pitcher Company has been received. These doors should be of great interest to architects and home builders as they are specially adapted for use in residences. Send for literature by using the coupon.

340. ACOUSTICS

The Metal Lath Manufacturers Association has put out another issue of "Metal Lath News." As always this paper contains news of vital importance to the building industry, especially to lathers and plastering contractors. This number has some interesting data on acoustics, stairways and soundproofing.

341. MONEL METAL

Data and information on the latest developments in Monel Metal is included in a broadside just issued by The International Nickel Company. The illustrations are excellent and the text short and comprehensive. Send for a copy by using the coupon.

342. PLASTER USES

The Celotex Corporation, in advertising their new Anchor Plaster, has put out a little booklet called "The Ounce and The Pound" for gypsum plaster. It is a most interesting little book and has for those interested a world of facts and information on the subject of plastering and use of gypsum plaster.

343. METAL SHAPES

By using the coupon below a copy may be secured of instructions and data on architectural metal shapes for glass block construction. This data has been assembled by Revere Brass and Copper Incorporated. The metal members are fabricated from architectural bronze and aluminum alloy extruded shapes.

344. WASHROOM FIXTURES

Bradley Washfountain Company has a new brochure illustrating their latest washroom equipment. Two items of special interest are circular washfountains and circular showers. Use the coupon and secure your copy.

345. GYPSUM PLASTER

A brochure to accompany the booklet mentioned above from Celotex on gypsum plaster "Anchor" brand has been received. This illustrates some of the finished results obtained with this plaster.

346. TOWEL DISPENSERS

Scott Paper Company has issued a booklet illustrating their various services for plant and office washrooms. Here are shown all the most modern soap and towel dispensers, and all types of paper towels and washroom equipment. Send for a copy by using the coupon.

347. WALL BOARD

Gypsum Wall Board with a trade name of "White Rock" is illustrated in a recent booklet put out by Celotex. This ties in more or less with the other two pieces of literature listed in this issue. Send for your copy. The coupon is for your convenience.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
68 Post Street
San Francisco, Calif.

Please send me literature on the f[illegible] items as checked below. This [illegible] places me under no obligation.

338 ☐	343
339 ☐	344
340 ☐	345
341 ☐	346
342 ☐	347

My Name ... ...

Name of Company..

Street. ....

City..... .. ..State..

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

ond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
Silty gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

AND—	Bunker	Delivered
River sand	$1.50	$1.90
Lapis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and $2.20	
Del Monte white	50c per sack	

CEMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.

(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Masaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	⅝x2¼" T&G	⅝x2" T&G	⅝x2" Sq.Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Otd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.

Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron — Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$30.00 per M
No. 2 common	28.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	22.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x8 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M

Slash grain—

1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.10 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)

5/16" 3-ply and 48"x96" $32.50 per M

"Plywall" (wallboard grade)—

¼" 3-ply 48"x96" $37.50 per M

"Plyform" (concrete form grade)—

⅝" 5-ply 48"x96" $110.00 per M

Exterior Plywood Siding—

7/16" 5-ply Fir $ 90.00 per M

Redwood (Rustic) 85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries saven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot

Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M

For smaller work average, $35.00 to $45.00 per 1000

Marble—(See Dealers)

Painting—

Two-coat work ..... per yard 42c
Three-coat work ..... per yard 60c
Cold water painting ..... per yard 10c
Whitewashing ..... per yard 4c
Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime mortar hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hat roll channels metal lath (lathed only)	.90
Ceilings with ¾ hat roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only)	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50
Wood lath, $5.50 to $6.50 per 1000.	
2.5-lb. metal lath (dipped)	.19
2.5-lb. metal lath (galvanized)	.21
3.4 lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.24
¾-inch hat roll channels, $72 per ton.	
Finish plaster, $18.90 ton; in paper sacks.	
Dealer's commission, $1.00 off above quotations.	
$13.85 (rebate 10c sack).	
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15	
Lime, bulk (ton 2000 lbs.), $16.00 ton.	
Wall Board 5 ply, $50.00 per M.	
Hydrate Lime, $19.50 ton.	
Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.60 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to grade quantity and runs.

Roofing—

"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Copper, $16.50 to $18.00 per sq. in place.
Cedar Shingles, $8.00 per sq. in place.
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq laid.
Slate, from $25.00 per sq., according to color and thickness.
Shakes—1x25" resawn ..... $11.50 per sq.
½x25" resawn ..... 10.50 per sq.
½x25" tapered ..... 10.00 per sq.
Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in place.
Sandstone, average Blue, $4.00, Boise, $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.—(See Dealers)

Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—

40c per square foot and up. Installation extra.

THE BUILDERS' EXCHANGE OF SAN FRANCISCO STANDARD WAGE SCALE

For mechanics employed on construction work in the Bay Region. Effective September 1, 1937

CRAFT	Journeymen Mechanics
Asbestos Workers	$ 8.00
Bricklayers (6h-5d)	10.50
Bricklayers' Hodcarriers (6h-5d)	6.75
Cabinet Workers (Outside) (5d)	8.00
Caisson Workers (Open)	6.40
Carpenters (8h-5d)	10.00
Cement Finishers (8h-5d)	10.00
Cork Insulation Workers (8h-5d)	9.00
Electric Workers (8h-5d)	11.00
Electrical Fixture Hangers	8.00
Elevator Constructors	10.40
Engineers, Portable & Hoisting	9.00
Glass Workers (8h-5d)	9.68
Hardwood Floormen	9.00
Housesmiths, Architectural Iron (Shop) (8h-5d)	9.00
Housesmiths, Architectural Iron (Outside) (8h-5d)	10.00
Housesmiths, Reinforced Concrete or Rodmen (8h-5d)	10.00
Iron Workers (Bridge and Structural) Including Engineers (8h-5d)	12.00
Laborers, Building (8h-5d)	$ 6.00
Laborers, Common (8h-5d)	6.00
Lathers, Channel Iron (6h-5d)	9.00
Lathers, All Others	9.00
Marble Setters (8h-5d)	10.50
Marble Setters' Helpers (8h-5d)	6.50
Millwrights	9.00
Model Makers ($1.50 per hr-6h)	9.00
Modelers ($2 per hr-6h)	12.00
Model Casters	7.20
Mosaic and Terrazzo Workers (Outside)	9.00
Painters (7h-5d)	8.75
Painters, Varnishers and Polishers (Outside)	8.75
Pile Drivers and Wharf Builders	9.00
File Drivers' Engineers	10.00
Plasterers (6h-5d)	10.00
Plasterers' Hodcarriers (6h-5d)	7.50
Plumbers (8h-5d)	11.00
Roofers, Composition (8h-5d)	9.00
Roofers, All Others (8h-5d)	8.00
Sheet Metal Workers (8h-5d)	10.00
Sprinkler Fitters	10.00
Steam Fitters (8h-5d)	$11.00
Stair Builders (8h-5d)	9.00
Stone Cutters, Soft and Granite (8h-5d)	8.00
Stone Setters, Soft and Granite	12.00
Stone Derrickmen	9.00
Tile Setters (8h-5d)	11.00
Tile Setters' Helpers (8h-5d)	6.50
Tile, Cork and Rubber (8h-5d)	9.00
Welders, Structural Steel Frame on Buildings	11.00
Welders, All Others on Buildings	9.00
Dump Truck Drivers, 2 yards or less	6.00
Dump Truck Drivers, 3 yards	6.50
Dump Truck Drivers, 4 yards	7.00
Dump Truck Drivers, 5 yards	7.50
Dump Truck Drivers, 6 yards	7.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	6.50
3 yards	7.00
4 yards	7.50
5 yards	7.50
6 yards	8.00

GENERAL WORKING CONDITIONS

1. Eight hours shall constitute a day's work for all crafts except as otherwise noted.
2. Plasterers' Hodcarriers, Bricklayers' Hodcarriers, Roofers' Laborers, and Engineers, Portable and Hoisting, shall start 15 minutes before other workmen, both at morning and at noon.
3. Five days, consisting of not more than eight hours a day, on Monday to Friday inclusive, shall constitute a week's work.
4. Transportation costs in excess of twenty-five cents each way shall be paid by the contractor.
5. Overtime shall be paid as follows: For the first four hours after the first eight hours, time and one-half. All time thereafter shall be paid double time. Saturdays (except Laborers), Sundays and holidays, from 12 midnight of the preceding day, shall be paid double time.
6. On Saturday, Laborers shall be paid straight time for an eight-hour day.
7. Where two shifts are worked in any twenty-four hours, shift time shall be straight time. Where three shifts are worked, eight hour's pay shall be paid for seven hours on the second and third shifts, allowing one-half hour for lunch.
8. All work, except as noted in paragraph 9, shall be performed between the hours of 8 a.m. and 5 p.m.
9. In emergencies, or where premises cannot be vacated until the close of business, men then reporting for work shall work at straight time. Any work performed on such jobs after midnight shall be paid time and one-half up to four hours of overtime and double time thereafter, provided, that if a new crew is employed on Saturdays, Sundays or holidays which has not worked during the five preceding days, such crew shall be paid time and one-half.
10. Recognized holidays to be: New Year's Day, Decoration Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Christmas Day.
11. Men ordered to report for work, for whom no employment is provided, shall be entitled to two hours 'pay.

BOOK REVIEWS

THREE ACRES AND A MILL: By Robert Gathorne-Hardy; Macmillan Company, New York City, N.Y. Price: $4.00.

A book about an Englishman and his house and garden. In the latter one can take a journey about Europe by going from plant to plant. Here is a Saxifrage from Spanish Navarre; here a group whose habitat is the Riviera; there a rare flowering shrub from Teneriffe or a plant from Iceland. This is a book written with an appeal to garden lovers and having a charm and quiet humor that should find a host of readers. There is horticultural knowledge that is not for the scientist or the pedant but for the general house and garden lover.

THE ATTRACTIVE HOME: By Lydia Powel; Macmillan Company, New York City, N.Y. Price $.60.

Here is a friend in need if you have just moved into that new home or apartment. You cannot or do not wish to hire a professional interior decorator nor do you wish at the same time to make mistakes that will mar or fall short of what you desire to do with the new home. In this little book will be found answers to those questions you are asking yourself. What kind of curtains for such and such a room? What kind and shade of paint for the kitchen and for the bathroom? It is all here for you and told in a delightful manner.

PRACTICAL HANDBOOK OF ELECTRO PLATING: (For W. Canning & Co.): Chemical Publishing Co., 148 Lafayette Street, New York City, N.Y. Price: $2.50.

A handbook covering plating, polishing, lacquering and coloring of metals. Concisely and clearly written and well illustrated. The various techniques are modern and fully described. The book is a craftsman's handbook and should prove a friend in need.

REINFORCED CONCRETE CONSTRUCTION: By W. T. Cantrell, LL.D.; Chemical Publishing Co., 148 Lafayette Street, New York City, N.Y. Price: $3.00.

A university text book complete in itself. Contains the essentials of concrete construction in detail together with the chemical as well as physical aspects of concrete explained. Glossary and index with illustrations go to make up a useful book for study and information.

AROUND THE YEAR IN THE GARDEN: By F. F. Rockwell; Macmillan Company, New York City, N.Y. Price: $3.00.

In fifty-two chapters this book gives you a full year in your garden. What to plant, how to plant it and how to care for your plants and flowers around the calendar. There are seven superb full colored plates, sixteen halftone photographs as well as numerous diagrams. The text is comprehensive. Altogether a delightful garden book and one well worth having on the work shelf of garden builders.

NEW HOME EVERY 43 MINUTES

Northern California home owners last year invested approximately $105 a minute, or $6300 an hour, in new homes built under FHA inspection and financed by insured mortgages, according to the district office of the Federal Housing Administration.

It was stated that ground was broken for a new FHA home in Northern California every 43 minutes, day and night, during 1939.

This was said to represent a considerable increase over 1938, which established a 10-year record for residential construction in this district.

During the past year, mortgages amounting to $55,258,000 were selected for appraisal on 11,982 homes built under FHA inspection within the 46 counties of Northern California. Including mortgages selected on existing dwellings, the district total for the year was 16,529 mortgages amounting to $74,683,100.

Alameda led all counties in the district as most active participant in the FHA Better Housing Program of 1939, with 3560 small home mortgages selected for appraisal for a total of $16,656,200. San Francisco was second with 3260 mortgages amounting to $16,261,800, and San Mateo County took third place with 1908 mortgages for $9,135,400.

"This year promises to exceed the 1939 record," said D. C. McGinness, district director, "with the construction industry, building material dealers, manufacturers and lending institutions uniting with the FHA in a concentrated drive to make available well equipped homes which can be paid for at approximately $25 a month, or less, including all charges.

"This has been brought about to a large extent by FHA insistence upon minimum construction requirements and property standards for low-priced homes. Plans and specifications for houses costing $3000 and less now are worked out just as carefully as for homes in the higher price brackets.

"Good houses at whatever price, however, can be produced only by the combination of good architecture, well-selected materials, and honest building. Studies and research along these lines by the Federal Housing Administration have contributed a large part in developing today's modern low-priced home."

RANGE AND SINK COMBINATION

Housewives may now have their range and sink, the two most used kitchen work centers, combined in one unit. A one-piece stainless metal deck forms the sink and stove top over a steel cabinet and stove base. The drawers and compartments are an unbroken, straight-line arrangement of related equipment. This arrangement prevents the waste of energy necessitated in walking from the stove in one part of the kitchen to the sink in another.

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ARCHITECTS A BIG AID TO HOUSING PROBLEMS

ARCHITECTURE was first of the professions to send its "skirmishers" well out front in the battle for low-cost housing, Frederick L. Ackerman of New York, Fellow of the American Institute of Architects, points out in "The Octagon," publication of the Institute, in reply to criticisms of architectural service for public housing projects by A. C. Shire, technical director of the United States Housing Authority.

"Mr. Shire makes no reference at all to a very considerable amount of work of a serious technical nature which was done by members of the architectural profession in the interest of a matter-of-fact restatement of the problem of housing, and also in the working out of such half-way solutions as it might be possible to find within the framework of our debt economy," Mr. Ackerman says. And continuing:

"As I run over the list of those who volunteered to act as pioneers in this field, seeking rational solutions within the frame of aims expressed by Mr. Shire, the small list seems to be made up almost exclusively of architects; engineers were conspicuous by their absence. There was no compensation to be derived from this pioneering work, which was confined largely to finding 'solutions' within the technical fields of design and construction, since they could not be applied under the reign of 'business-as-usual.'

"But what impels me to find fault with Mr. Shire's statement is the absence of any reference to a genetic account of housing in the United States and to the casual circumstances which gave rise to the recent drift toward a more matter-of-fact technique of design. From his statement one gains the impression that the architect has played no part at all in this work: this is not so.

"The fact is, and can be abundantly documented, that the profession of architecture had sent its skirmishers well out front, far beyond the line of business-as-usual, before Mr. Shire became interested in the problem.

"Mr. Shire singles out as conspicuous examples of misguided men 'the 1920 style architect.' But it should be recalled that it was during the 1920's that a considerable number of architects, grown inexpressibly weary of working under the canons of conspicuous waste and competitive spending, took up the rather thankless task of attempting to restore the problem of housing in terms of a matter-of-fact approach.

"Naturally, there are few examples of accomplishment during that period, for the 1920's offered practically no opportunities of translating rational aims into rational structures. That was the period during which 'Financial Business' rated it safer, more conservative, to loan a few billions to foreign nations for launching of housing schemes and preparations for war than to risk a few dollars in the United States in the interest of more and better housing.

"The reason why we are now resorting to subsidized housing to take care of how large a proportion of our total population nobody knows is that no one group—financiers, bankers, industrialists, investigators, architects, engineers, builders, 'subs,' or building trades labor—is prepared to deal with this problem of housing for all of us. Mr. Shire's troubles with designs for low-cost housing are not due merely to deficiencies in 'local' individuals; they arise in a broad institutional background. The fact that we are discussing this matter in this way is probably due to our deep sense of frustration.

"Designing for low cost and low rents is certainly and emphatically unlike the experience of the architect prior to the years of the depression.

"Has Mr. Shire forgotten what actuated building during the several decades prior to 1930? Has he forgotten Veblen's 'Theory of the Leisure Class' with its discussions of the pecuniary canons of taste, conspicuous waste, competitive consumption, etc.? Has he forgotten the dominating position of the promoter, the speculator, the jerry builder and the criteria under which a part of the profession prostituted its aims and knowledge?

"What was there in the preparation of drawings under the injunctions to design the cheapest damn thing that would hold together, to sneak below the minimum requirements of the building law, to crowd the land, to exploit light and air—what was there in all this experience which would prepare him to design for minimum cost-of-use over a sixty year amortization period? The answer is, there was nothing.

"And what was there in working under the criteria of conspicuous waste and competitive spending in designing structures for institutions of higher learning, for great banks, for religious institutions, for the would-be and the ultra-well-to-do, and so on and on—what was there in all this experience to prepare him for the advent of subsidized housing for the very poor—again there was nothing.

"The wonder is that the profession kept a tiny flame of interest in workmanship and well-building going all through this period, and more the wonder that revolt against this period of misguided effort showed its head before the Great Depression set in.

"And just what had engineering to offer at this same juncture? This is what it had to offer: it accepted the whole complicated muddle of the construction industry, considered as a whole, as the point of departure in its quest for efficiency in providing habitations for all of us. It accepted the inordinately wasteful system of distribution and assumed that it was solving some problem by saving some picayune items in a living unit while the torrent of waste in the production industry as a whole went roaring by. What was there in the experience and training in the field of the construction industry which prepared the construction engineer competently to deal with this problem of adequate housing for all of us? Again, one may say, nothing much."

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RESEARCH BULLETIN DESCRIBES RECENT BUILDING DEVELOPMENTS

HOME owners may cut their fuel bill by as much as 44.75 per cent, and reduce the time necessary to heat rooms on winter mornings, by a new method of insulation described in a research bulletin on building materials and equipment recently published by the Producers' Council and edited by the Structural Service Department of the American Institute of Architects.

Savings in heating costs may, with care, be increased to 50 per cent, the bulletin says. The insulation also adds to the livability of homes by maintaining a more constant temperature throughout the house and decreasing drafts across the floor and down the walls.

Tests were conducted in two equally exposed houses which were occupied. Wall-thick mineral wool was applied to the ceiling and outside walls of one, and a three-quarter inch insulating board of the same material was placed under the floors.

Both houses contained four rooms and a bath and were conventionally constructed of wood stud walls, pitched roof, and double-hung wood windows except in the bath and kitchen. They rested on foundations consisting of brick piers covered with horizontal boarding to grade.

For testing purposes, the circulating stoves that normally heated the houses were replaced by one two-kilowatt heater in each room. Current for these was recorded at fifteen-minute intervals on a seven-day chart. This arrangement provided a flexible heat source and an extremely accurate measure of its use. One of the two houses was used with its construction intact while the other had the insulation installed in floor, walls and ceiling.

The average temperature of the outside air during the fifteen-day testing period was 35.2 degrees, with a high of 57.5 and a low of 19 degrees. The average wind velocity was four miles per hour. The heat loss during the period was 5,754,275 British Thermal Units for the uninsulated house, and 3,176,760 BTU for the insulated one. Since the temperatures in the uninsulated house were slightly lower than those in the insulated house, it seems possible that, with rigid control of temperatures in the two houses, the reduction in heat loss might have approximated 50 per cent.

NOISE PROBLEM SOLVED

Another new development in construction has solved the serious noise problem that arose in buildings where air conditioning ducts have acted as carriers of sound. A fire-resistant, moisture-resistant sheet has been developed which may be used to line vents. "It absorbs up to 70 per cent of all noise that strikes it—soaks up sound before it has a chance to spread," it is explained. "Basically mineral in composition the sheets will not

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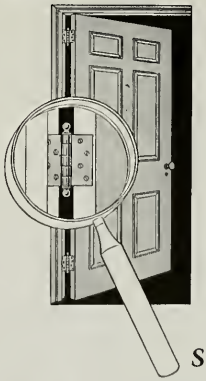

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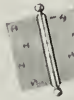
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support flame and cannot contribute to the spread of fire.

"Efficient air conditioning is recognized today as a valuable advantage in every type of building. Yet, unless proper precautions are taken, ventilating ducts may often be the cause of a serious noise problem that largely offsets the many advantages of the system. For, while carrying clean, fresh air throughout the building, the ducts may also act as 'speaking tubes' that convey sounds and noises from room to room, from one end of the building to the other, destroying privacy and reducing comfort.

"In many buildings, quiet and privacy is a vital and necessary operating requirement; in all others they are a decided advantage. Broadcasting studios, for example, must take every precaution to keep noises and outside conversations from entering the studio and interfering with program transmission. Schools, hospitals, office buildings and factory office areas are other locations where freedom from noise is an essential requirement.

"To overcome this irritating noise problem, ducts must be lined with a sound-absorbing material specially designed to deaden noises generated by, or entering, the system. A satisfactory material for this purpose must, however, meet other exacting requirements in addition to sound-absorption. It must be fire resistant, moisture resistant and have a surface that will not materially increase friction losses in the duct system."

POPULARITY OF PRE-FABRICATED HOMES

Architects may simplify drafting problems and save up to two-thirds in supervision time by constructing pre-fabricated homes, it is declared. The success of this type of construction is witnessed, it is pointed out, by the $3,000,000 worth of architect-designed ready-made houses which have been erected in the past three years. The pre-fabricated home is completely ready for occupancy seventeen to thirty days after the design is approved.

A four-inch module represents the nominal wall thickness in the wood frame house. The use of this module in the pre-fabricated method permits standardization of parts. It simplifies the design by eliminating fractions without taking away flexibility. Any house—any size, any type—can be completed in thirty days or less.

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NORTHERN CALIFORNIA CHAPTER

(Continued from Page 34)

ing architects to compete with anyone on a basis of cost.

A motion by Mr. Evers, seconded by Mr. Weihe, that the Chapter do everything possible to oppose H. of R. bill No. 7635 as it now stands, was passed.

A motion by Mr. Reimers, seconded by Mr. Appleton, that the Chapter send a letter to Marshall Dill recommending that the names of the architects who designed buildings for the Exposition be posted upon them, was passed.

A report from Charles F. Maury, Chapter representative on the building industry conference board, was read. Mr. Maury told of the efforts made to defeat Proposition No. 1 on the ballot last November, and also described activities in progress to aid the building industry in the Bay Region.

Irving F. Morrow's report as Chapter delegate to San Francisco Federation of Arts was read. Mr. Morrow told of efforts made to protect the Marina Boulevard district, and of close co-operation with the Municipal Art, City Planning and Park Commissions in matters of proposed monuments and parks.

Harris C. Allen also sent in a report to be read. As chairman of the committee on large scale housing, Mr. Allen was high in his praise of the work being done in this district, and suggested an exhibition of this work by photographs and models, be held to arouse and stimulate further interest.

A petition to be signed by all California Chapters to the board of directors of the Institute was read. This requested that the 1941 Institute convention be held between Los Angeles and the Yosemite Valley. There was some discussion as to the finances required to properly entertain the convention, but upon motion of Mr. Stringham, seconded by Mr. Ciampi, the following resolution was carried: "That the Chapter approve the resolution of invitation as adopted by the Southern California Chapter, and that the petition be signed."

—John Davis Young, secretary.

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ARNOLD BRUNNER SCHOLARSHIP

Establishment of the Arnold W. Brunner Scholarship of the New York Chapter of the American Institute of Architects, carrying a stipend of $1,200, is announced by Frederick G. Frost, president of the Chapter. Open to any citizen of the United States engaged in the profession of architecture, regardless of place of residence, the scholarship will be awarded annually for advanced study "in some broadly defined field of investigation in architecture."

Funds for the scholarship were provided by a bequest of the late Emma B. Brunner in memory of her husband, who was a member of the Chapter. The first award will be made in 1940 for a comparative study of the influence of local conditions on regional architecture in the United States, involving an analysis of the practical effects of geographic and social factors on past and present building.

Applications will be received by its headquarters, 115 East 40th Street, New York City, up to April 1. The first award will be announced about June 1.

The subjects of research and the terms and conditions of the scholarship are determined by the Chapter's Committee on Education, of which John C. B. Moore is chairman. Other members include Dean Leopold Arnaud of the Columbia University School of Architecture, Dean E. Raymond Bossange of the New York University School of Architecture, Charles Butler, William J. Creighton, Graham Erskine, Donald A. Fletcher, Abraham Grossman, Ely Jacques Kahn, Otto Teegen, and Frederick J. Woodbridge.

Candidates for the scholarship will be required to submit their qualifications, together with briefs or outlines of their proposed studies in the field of investigation assigned. They must have adequate professional background, more advanced and broader in scope than is generally implied by undergraduate architectural school training.

The scholarship holder will pursue studies, carry on research or travel

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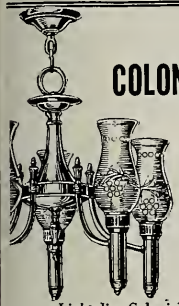

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and submit drawings or reports in accordance with the proposal made by him prior to the award. While under normal circumstances the study must be completed within one year, a previous holder of the scholarship will not be precluded from receiving the award in a succeeding year. Under exceptional circumstances an award may be divided between two or more candidates.

LANGLEY SCHOLARSHIPS

Edward Langley scholarships, open to all persons engaged in the profession of architecture in the United States and Canada, will be awarded in 1940 by the American Institute of Architects, it is announced by Charles T. Ingham, secretary of the Institute. Proposals of candidates will be received at the national headquarters of the Institute, 1741 New York Avenue, Washington, D.C., until March 1.

The awards, limited to ten and with $1,500 as the maximum stipend, provide for advanced study, research, and travel. Eligible groups include architects, architectural draftsmen, teachers of architectural draftsmen, teachers of architecture, students about to graduate from schools of architecture, and graduate students.

A candidate who is an architect or architectural draftsman must be proposed by an architect living in the same country. Teachers, graduate students, and students about to be graduated from an architectural school may be proposed by the faculty or head of the school. No candidate may propose himself.

Architectural draftsmen are eligible for the scholarships whether or not they are college graduates, and regardless of whether they are engaged in drafting, writing specifications, supervising, or acting as executives. Although awards to undergraduates are precluded, draftsmen may apply for funds to do undergraduate work or to take special courses in architectural schools. A scholarship may be awarded more than once to the same person.

The Langley scholarship fund, established to "promote higher education in architecture" in 1936 by the will

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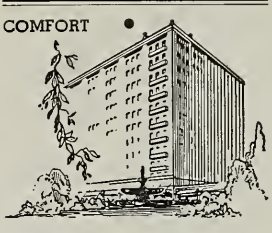

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of the late Edward Langley, architect of Scranton, Pa., and a native of Canada, aggregates $104,000. The 1940 awards will be announced about June 1.

BOULDER DAM THREATENED

Recurrence of rumors of "plots" to sabotage Boulder Dam, recently brought the following statement from John C. Page, Commissioner of Reclamation:

"Boulder Dam is perfectly safe. There has been no 'plot' unearthed. Reports that the Bureau of Reclamation is fearful that someone will dynamite the dam are ridiculous. The dam is much too sturdy to be damaged in such a manner.

"A month or more ago two of our regulations regarding visitors were made a little more strict. This was done as much for the safety of the visitors as for the safety of the dam. Private boats are no longer permitted to sail up to the dam on Lake Mead. This is one of the restrictions. There is quite a suction near the intake towers and only experienced pilots such as those of the regular sight-seeing boats and of the Government boats are permitted near this water. All boats are allowed the full freedom of Lake Mead otherwise, however. We would not want any boat swamped because of our carelessness in permitting it to enter danger. The other change in our handling of visitors has been the assignment of two instead of one guide to the larger parties of tourists and sightseers who go down in the elevators and who take the regularly scheduled tour through the dam and power plant, as some 600,000 people did last year. This end of our service to the public had almost outgrown our facilities. Some guides had parties of 75 or more and could scarcely do the visitors justice.

"All rumors and reports that visitors are no longer welcome at Boulder Dam are entirely erroneous. I doubt whether a tourist who had been through the dam in November would be able to detect any difference at all in his reception if he were to return today, except that he might note that it was easier to have his ques-

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tions answered because of the presence of a second guide if his party happened to be a large one.

"The Bureau of Reclamation is making preparations to construct a visitors' house, which will be air-cooled and which will contain a working model of the whole Colorado River development, as an added feature at Boulder Dam.

"The public at large has demonstrated such a great interest in Boulder Dam, and has behaved itself so well while there, that I believe all these rumors should be disposed of at once and for all in justice to our guests, past, present, and future. We are now better able than ever to take care of the public at Boulder Dam, and all are invited to see it. It is a sight worth some of anyone's time, too."

WEAKNESS OF STAINLESS STEEL

The inability of stainless steel to resist the corrosive action of seawater may be overcome by the addition of tiny traces of silver, it has been discovered by scientists at Massachusetts Institute of Technology. A salt of silver, silver chloride, is insoluble in seawater. Prof. R. S. Williams and his associates at M. I. T. have found that as little as 0.42 per cent of silver will cut down stainless steel's salt water corrosion more than 80 per cent.

Other advantages claimed for silver-steel is a greater ease of machining and an improved polish. A very uniform and highly polished surface in itself inhibits corrosion. The function of the silver in the alloy is to make chlorides insoluble under the action of seawater which form a thin, guardian layer.

CELOTEX EXPANSION

Reports from all Celotex branches and sales territories indicate that nearly all of the company's 8300 dealers expect new home construction this year to exceed all years since 1928. The long term building cycle is on the up-swing, and most authorities believe that the upward movement is not likely to be interrupted by the uncertainty of world conditions.

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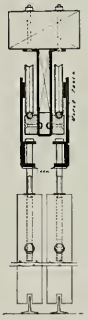

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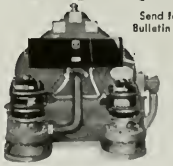

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panded considerably in 1939 to provide a group of building products unified for the benefit of its dealers and the buying public. The company increased its field organization in 1939 and will continue this expansion this year.

TREASURE ISLAND AGAIN IN MAY

When Robert Louis Stevenson dreamed of "Treasure Island" on the cypress-studded coast of Monterey, he did not realize that he was introducing a theme that some thirty years later would focus the eyes of the world on the Bay of St. Francis and make of California the Mecca for tens of thousands of tourists in quest of beauty and the "Magic City" of the Golden Gate.

The Aladdin island of the Exposition will be the lure of millions of persons again in 1940. With gorgeous pageantry, it will emerge from the dreamland of winter on May 25 to offer to the world a magnificent spectacle of color with new educational and cultural exhibits, with new headline entertainment, with new foreign representation and with a new Gayway of frolic and fun.

Indeed, the Exposition of 1940, while it will retain most of the cultural and educational features of its predecessor, will offer many headline attractions which are distinctly its own. Its theme girl will be "Miss Streamline" and its dress, gayer than ever, more brilliant of hue, the epitome of modernity from the resplendent Tower of the Sun to the geometric designs on pillar, wall and dome. Over this jeweled city set in the silvery water of San Francisco Bay presides "Pacifica," benignant deity of the great sea.

The builders of the Exposition of 1939 did their work well and the rains and winds of winter did little to mar the beauty of the exhibit palaces and the statuary that lines the fountains and lagoons. Time and Nature, too, have improved the velvet texture of the lawns, the foliage of tree and shrub and hundreds of thousands of new bulbs and plants are being hidden in the newly-turned soil to burgeon and bloom with the early days of the Fair.

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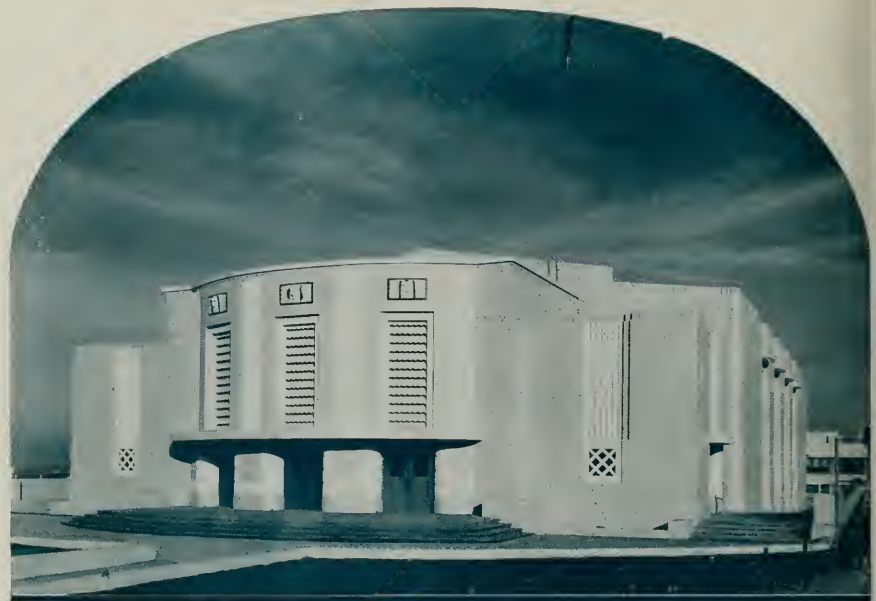

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● The Auditorium of the San Pedro High School, San Pedro, Calif., has concrete walls and floors and a firesafe roof. Exterior surfaces coated with portland cement wash. Gordon B. Kaufmann, architect; J. Harry Hall, associate architect.

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RUNNING FIRE

by MARK DANIELS, A.I.A.

Medicine Man Architecture

The old fashioned patent medicine man bore about the same relation to the medical profession as does book-of-house-plans salesman to the architectural profession. They each had a market of about the same number of suckers with the advantage of more gullibility easing up the work of the plan peddler.

Personally, for usefulness and enjoyment, I am inclined toward the services of the medicine man. He really deserves our support and sympathy. It took him years to learn how to deal out his dope, while the plan peddler can start out with his stuff under his arm the first day. At least the medicine man will give you many a laugh. When you study these books of plans and realize the trouble unsuspecting brides and grooms are going to have, your heart aches.

* * *

The Pseudo Modern

One reason why modern architecture still has much opposition is that the modern effect is purely superficial. Many of the architects who think they are modern still plan their structures in the same manner, then work out the exterior with a lot of vertical and horizontal lines, leave off cornices and call the whole thing modern. If this is all there is to modern architecture, all that is needed to make a German into a Spaniard is to tie a red bandana around his head.

Modern architecture is not the mere rearrangement of exterior lines. It calls for a complete overhaul of the entire structure, inside and out, to bring it into line with modern thought, modern methods of living and modern instruments of service.

* * *

Co-Education

The laboratory work for the chemistry courses in modern co-educational institutions seems mostly to be done in our dimly lit cocktail bars. Of course, this saves the state money for electric current, reduces the outlay for equipment and gives the student a real feel of the subject, but I doubt if many of the graduates know that the Ox-eyed daisy is quite different from the oxide of zinc. Which last comment calls to mind the observation that the courses in botany these days are filling the galleries with girls in whispering huddles before the statue of Apollo Belvedere.

* * *

Streamlining

We have streamlined trains, streamlined diners, dresses, buildings, newspapers and streamlined plumbing. Why not streamlined sculpture?

As a suggestion to those sculptors who are struggling to get away from the baleful influence of Michelangelo, Cellini, Bernini, and Rodin, the following "streamline" suggestions might be helpful:

The hose bib motif
The milk pitcher motif
The water closet motif
The leaking faucet motif
The wet diaper motif

Almost any model will do for each of these, and many others which obviously makes the work that much simpler.

* * *

Ode to a Blonde

I have at last found one sure-fire method of getting to the office at a particular time each morning. On one of the early cars, and always the same one, there is a tall, slim, extremely good looking blonde. She always crosses her right knee over her left, and in some way unknown to me will give three to four bites on a piece of gum some ten minutes after I get on the car. I have watched closely but she does not put the gum in her mouth when I am there. So I take this same car each morning in the hopes that I shall see her cross her left knee over her right and not chew an alien piece of gum three or four times.

I hope she does not move or get married for then I shall do less work and sleep later.

* * *

Periodic Lament

I was sipping my Old Fashioned disconsolately when The Little Man walked in and hung the head of his cane violently over the bar rail.

"The scourge of man is civilization," he blasted at me. "No civilization becomes civilized until it becomes uncivilized." I tried to ask why but he continued too quickly.

"Taxes are assessed on drinks, salaries, income, food, property, liquor and licorice. There are city taxes, county taxes, state taxes and national taxes. On each drink I buy I pay three per cent sales tax; the cost of the liquor is excise taxed; the manufacturer of the bottle and its contents must pay corporation tax, income tax, payroll taxes on his employees and an infinitude of minor taxes on his materials; and then there is a tax on my salary and one on my income so that I have to earn thirty cents to buy a twenty-five cent drink. Eventually we shall have to earn fifty cents to pay for a forty cent drink which we now buy for twenty-five cents for which we must earn thirty cents. And in the milleniua you will have to go through bankruptcy to purchase an Old Fashioned. The Persians, the Assyrians, the Medes, the Babylonians, the Egyptians, the Greeks and the Romans had taxes. The taxes became worse as civilization increased—when another wild tribe would come in, destroy the tax collectors and put in their own.

"After a thorough and complete investigation, I have decided that I shall go to Moorea, Borbora, Raiatea, Un Pou or some south sea island that is completely uninhabited, that has a high peak which tax collectors cannot climb, where the Marquesans, the Tahitians or the Samoans do not pay taxes to the tribal gods, goblins and chiefs, and there I shall brew rum from sugar cane, squeeze oranges and cocoanut milk into the rum and neither hell nor the tax collector can touch me."

The thumped his cane violently on the bar and stalked out. The bartender taxed me for The Little Man's drink.

FOUNDATION

Some men toy with dreams and plans;
Others mould their thoughts by hand.
Always they sweat and swear and bleed
Yet build increasingly for future need.

Deep tragedy prayer hope
And beauty that never fades—
These are the tools of men
By which great cities are made.

—M. F. Burt

ARCHITECT AND ENGINEER

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Volume 140 MARCH, 1940 Number 3

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Ben H. O'Connor, A.I.A.

The following architects and designers are represented by work in this issue: William W. Wurster, Lewis P. Hobart, C. Coggeshall, Joe Kim, Paul Bry, Geo. P. Simonds, Franklin & Kump, Robert Stanton, Clarence W. Mayhew, Arthur Lamb, Gordon B. Kaufmann, Loy Chamberlain, Vincent Raney, and Richard J. Neutra.

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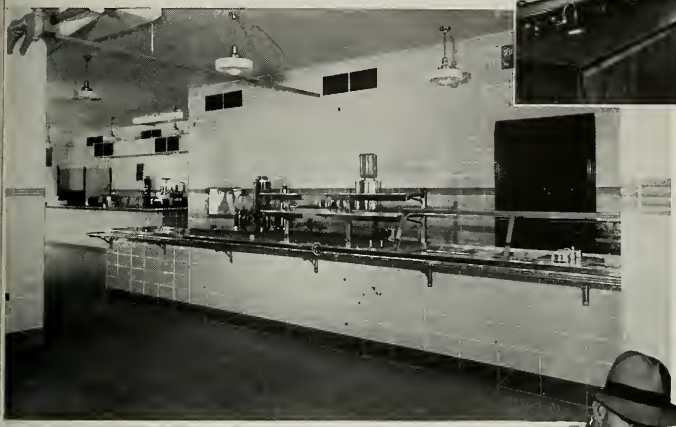

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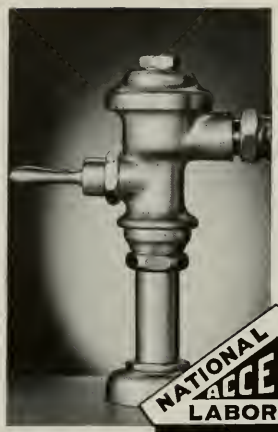

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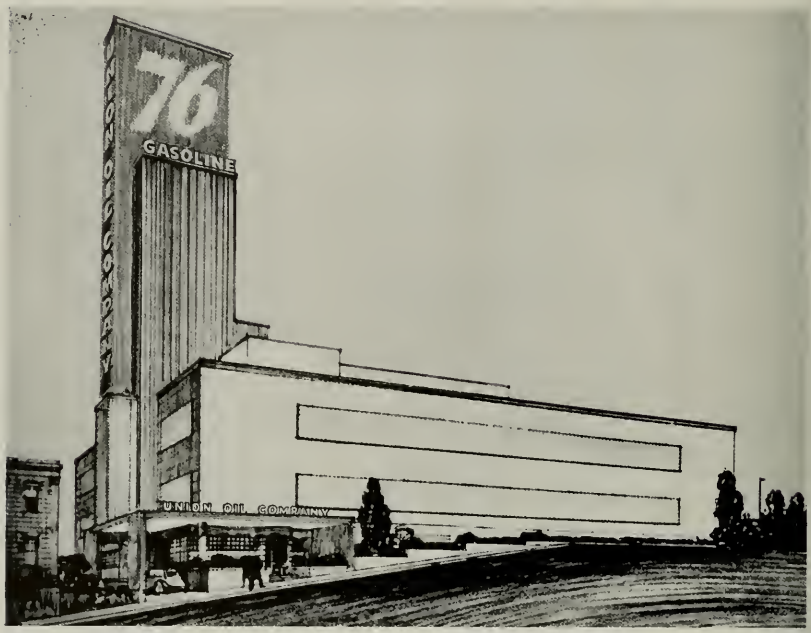

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Lewis P. Hobart, Architect

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The pentroom, with an immense deck, enjoys a beautiful view of Yacht Harbor, Golden Gate Bridge and Marin hills.

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Picture window of polished plate glass reflected in a floor-to-ceiling mirror, which forms the background for a fireplace. Notice how "open" this room is.

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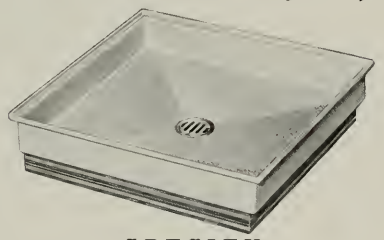

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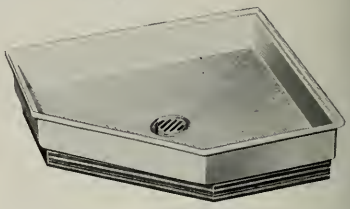

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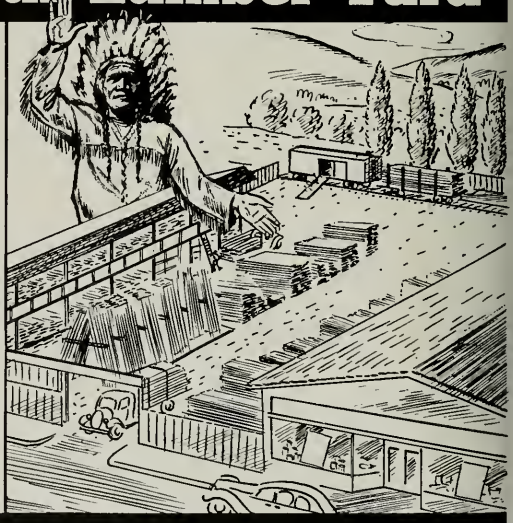

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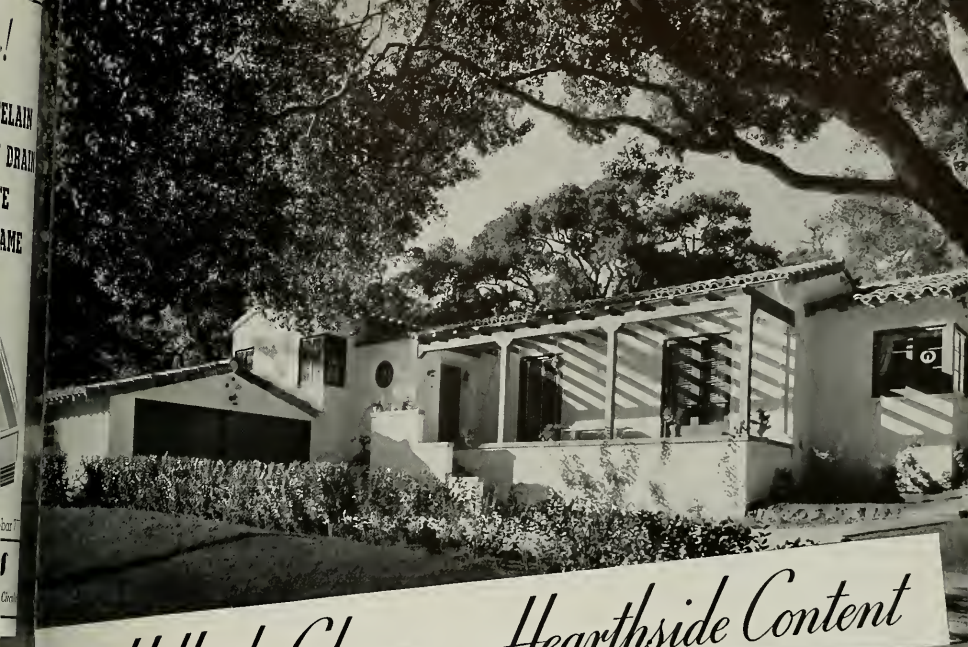
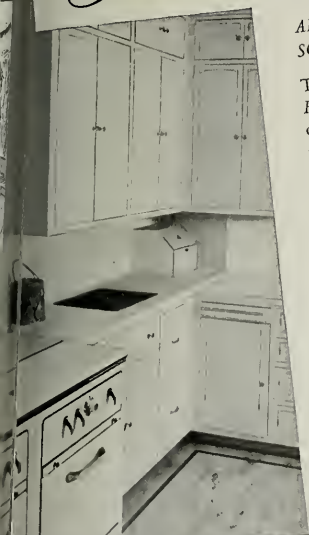


Hillside Charm · Hearthside Content

ALL-GAS EQUIPMENT COMPLETES HAPPY SOLUTION OF INTERESTING PROBLEMS

This gas-equipped Spanish home for *Mr. and Mrs. Harry R. Butler* is ideally adapted to its sloping, oak-studded site in Hillsborough, Calif. ☆ With professional skill, architect *Leo J. Sharps* solved his problem of design and equipment. ☆ Modern forced-air gas heating spreads comfort to every room, circulating warm air in winter, cool air in summer. An automatic gas storage water heater keeps hot water "on tap" 24 hours a day. And note, in photo at left, how the new gas range accents kitchen charm—utility and beauty combined. ☆ Architects, builders, owners agree: All-gas planning is the sure way to make a *house* into a livable *home*.



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You'll win lasting gratitude of your feminine clientele by recommending quick, clean, economical gas cooking.

A *living* room that lives up to its name. Uniformly warm in winter and comfortably cool in summer.

HOUSE OF MR. AND MRS. LAWRENCE STRAUSS, BERKELEY, CALIFORNIA
WILLIAM WILSON WURSTER, ARCHITECT

Photo by Sturtevent

Courtesy of S. & G. Gump, San Francisco

"GARDEN CLUB OF AMERICA REDWOOD GROVE," BRUSH DRAWING BY LILIAN MILLER

REDWOOD, THE OLDEST, THE NEWEST WOOD

FREY JUAN CRESPI sat down to write his daily chronicle of the progress of Don Gaspar de Portola's expedition. The date was Tuesday, October 10, 1769. On that day, according to the written record, white men gazed for the first time "over plains of low hills, well forested with very high trees of a red color, not known to us. They have a very different leaf from the cedars, and although the wood resembles cedar somewhat in color, it is different and has not the same odor."

"In this region," Frey Crespi wrote, "there is a great abundance of these trees and because none of the expedition recognizes them, they are named Redwood from their color."

Perhaps Drake, a century before, had seen the redwoods. Perhaps, even the "greate firme poste," upon which he placed his sovereign's claim to Nova Albion was hewn from the great sequoias, but if so he failed to record the fact in his dairy.

These were the redwoods of the Coast. High in the Sierras there grew another variety—Sequoia gigantea (referred to by the U. S. Forest Service as Sequoia Washingtoniana) due to remain unknown to civilization until 1833. Indians called them Wawona — The Big Tree, the name by which they are known today.

There are many minor differences between the two redwoods, their location, method of reproduction, their bark and others, but chiefly these: There are few Big Trees—they are no longer cut for lumber. There are many thousands of acres covered by Coast Redwoods, from which come redwood lumber. Big Trees are moderately tall and very thick. Coast Redwoods are moderately thick (16 feet through) and very tall. The tallest is the Founders' Tree, 364 feet high. Everything written in the articles which follow refers to the Coast Redwood.

In prehistory redwoods flourished in many parts of the Northern Hemisphere. Fossil remains have been found from Ireland round the earth to Greenland, from Spitzbergen to Japan. In the south of France they made a gallant stand against the oncoming glaciers of the Ice Age before being pushed into the Mediterranean. Only in California did they survive the ice.

CLOSE-UP OF A REDWOOD SHAKE ROOF

Roof texture may vary with different shake and shingle styles and application methods. In the above photo, a section of the roof of "Sunshine House," heavy-butted Monterey shakes are laid with a six-inch exposure. Though sawed to standard sizes for easy laying, the surfaces are "combed" to give a rough pattern to the roof. Stock six-inch redwood gutter has been used throughout. The house was designed by Loy Chamberlain and Vincent G. Raney.

PRODUCING REDWOOD LUMBER

actors and logging arches are essential to the selective logging methods em-oyed in the redwood region. Note how immature trees are left for forest opagation. Below: Typical mill and storage facilities for dry finish.

REDWOOD sawmills began to appear in the neighborhood of San Francisco about 1840. The first mills were very small and inefficient, when compared with the modern ones of today. They were usually located at the mouths of rivers, and logs were driven down the streams to the mills. San Francisco itself was the principal market for these early mills, but as the city grew, more and more world commerce was attracted to this port. The first export shipment to Australia was made in 1858. As early as 1881 shipments of redwood lumber were made to Boston, New York, the West Indies and South America. In 1883 an export cargo of 5,000,000 feet went to England.

With the increased demand, sawmills gradually improved their equipment. This improvement, in the stage of development which it has reached today, makes redwood logging and sawmill equipment unique in lumber operations for sheer size and power. Today the band saws of the head rig are carried on 9-foot drive wheels, spaced to accommodate logs 8 feet or more in diameter.

But particularly interesting from the conservationist's standpoint are the methods used in the redwood forests. Let it be understood at the outset, however, that there are two distinct redwood regions. The first is the more than 40,000 acres of permanently preserved parks and playgrounds. These contain the largest and

finest stands, which have been acquired by both government and private funds. The second redwood region is that from which redwood lumber is cut.

After the bull-team days and until the advent of crawler-type tractors, the bulk of logging was done by high-lead or slack-line methods. However, the use of tractors has permitted the operation of a "selective logging" program which is approaching a completely sustained yield basis. Under the selective logging program only mature trees are harvested, leaving younger trees to grow rapidly, due to the removal of competition.

Whereas any given forest area may increase its board-foot content either not at all or as little as 1% a year, lands which have been selectively logged add as much as 5% and in some cases 8% to their board-foot content per annum. Thus, logging operators find that forests, once logged on a selective basis, produce a larger percentage of clear lumber than virgin timber. Under the plan of operation which is now in practice there is an adequate standing supply of redwood to last for approximately 100 years, not counting new growth or accelerated growth on selectively logged lands.

Byproducts play an increasingly important role in redwood operations. Sm lengths are remanufactured into products such as Picket Pack fencing (se picture above); bark is shredded to provide insulating material for ho industrial refrigeration, water heaters.

INNUMERABLE USES OF REDWOOD

Courtesy Southern Pacific Company

THIS HOUSE BORDERING THE SOUTHERN PACIFIC RAILROAD IN NEW MEXICO IS BUILT OF SALVAGED REDWOOD TIES

MORE THAN 150 USES OF REDWOOD LISTED

The following condensed list illustrates the principal uses of redwood:

GENERAL CONSTRUCTION

Heavy and light dimension
Rough lumber
Common boards, shiplap, etc.
Partition lath, etc.
Shingles

Siding:

Bevel siding
Drop siding
Bungalow siding
Log-cabin siding

Exterior Millwork:

Window and door frames, sash
Exterior cornices
Half Timber Work

INDUSTRIAL

Agricultural implements
Baseboards
Batteries (separators)
Blinds
Porch ceilings
Shutters and blinds
Porch flooring
Columns

Interior Millwork:

Finish
Trim (molding)
Cornices and beams
Wood sash
Panels
Doors and windows (stiles and rails)
Wainscoting and paneling

Flooring:

Interior flooring
Exterior flooring
Factory flooring

Beehives

Boats:

Benches
Boxes
Lockers
Burial caskets, outer boxes
Cabinets and cabinet work
Cab tops (locomotive)
Cameras and camera cases
Candy pails
Car roofing (railroad)
Car trim (railroad)
Car siding (railroad)
Caskets, cases and shells
Casing
Cheese vats
Church pews
Churns
Coffins
Cooling towers
Corn cribs
Cornices
Crates and crating
Cross arms (telegraph, etc.)
Garage doors
Electrical apparatus and machinery
Elevators
Exterior trim
Feed boxes
Fence boards
Finish
Fixtures, store, etc.
Flooring, porch and interior (plain and parquet)
Flour boxes (bins)
Flower boxes
Furniture
Gates
Greenhouses (general)
Gun cases
Hen houses
Hay ricks
Ice cream tubs
Ironing boards
Kitchen furniture, cabinets, sink

(Turn to Page 74)

REDWOOD is unusual among softwood lumber in the variety of commercial purposes to which it is put. The Department of Commerce lists a total of 141 different industrial and general construction uses in which it is commonly found, and incidentally, 56 foreign countries to which it is exported in sizable amounts.

Aside from its architectural usage, redwood comes into industrial importance in many applications. Somewhat in the excess of 90% of all domestic wine is aged in redwood vats. In San Leandro, California, one food products company alone employs 475 redwood vats in processing of pickles, preserves and condiments, each vat containing a full carload or more of the product.

Heavier industries, also, account for a sizable proportion of redwood consumption. End-grain block flooring, mill roofs and sash are some of the uses common to all industrial plants. Redwood makes its contribution to equipment as well as plant, however, by affording easily constructed tanks, vats and cooling towers resisting the corrosion which takes high toll of less durable materials.

Such widely separated and diversified usage is due to the physical characteristics of the material itself. Redwood is given especially favorable rating as a result of the tests carried on by the Forest Products Laboratory. Its volumetric shrinkage is the lowest of any United States softwood. Its paint retention value is as much as 40% greater than some other woods tested in the Laboratory. It is ranked in the top bracket for durability. While it has low density, it has favorable strength ratings, particularly in relation to weight.

Such qualities as these determine its usage not only for industrial purposes but for residential and commercial construction as well. Its durability and paint retention suit it particularly for siding and exterior trim, and its workability for interior uses.

(Turn to Page 74)

THE EAST SETS ITS OWN PATTERN

Apartment library in New York City, designed by C. Coggeshall. All fittings are so planned that, at expiration of lease they may be removed and easily reassembled in another location. Couch folds out into bed, when study is used as a guestroom. Redwood shelves and cupboards are given extra depth to accommodate oversize books of prints, radio apparatus, and liquor closet. Lumiline illumination concealed at top of bookcases.

Office of the designer, C. Coggeshall. Cupboards, seat, shelf, picture mould, and bookcases all of redwood. Upholstery is black leather. The table in the foreground is made of strips of various woods in order to show clients their colors and decorative values.

Study in a residence in New York City. Upper shelves used to display owner's collection of African masks. Fins supporting the shelves lend an Oriental flavor. Framework below masks conceals lumiline lighting, with apertures both above and below. All woodwork is redwood. C. Coggeshall, designer.

Photos by Nyholm

FOR MODERN REDWOOD INTERIORS

Modernization makes heavy demands on the ingenuity of a designer. In the photo at right the designers, Jo Kim and Paul Bry, wished to treat two rooms as a single living unit, without disturbing the original structure. The problem was solved by continuing the couch structure past the previous wall to form a cabinet beyond. All wood used in the reconstruction is redwood.

Alcove in an apartment designed by Paul Bry. Adjoining the dining room, it is frequently used for cocktails. The bar-cabinet is lighted from within and lined with formica. Translucent glass at back and sides of couch conceal additional light sources. Cabinets, shelves, and couch housing are of redwood.

Matched, figured redwood panels provide the faces and wide redwood boards the top of the buffet in this dining room, also designed by Paul Bry and Jo Kim.

REDWOOD DINING TABLE WITH GLASS TOP

PAUL BRY, DESIGNER

REDWOOD A NATURAL BACKGROUND FOR PAINT APPLICATIONS

By JEROME HARWOOD

A SATISFACTORY paint job is created from the combination of good paint properly applied to a satisfactory surface. Redwood has high ability to take and hold paint and finish coatings. The U. S. Forest Products Laboratory divides commercially important conifers or softwoods into four classifications for painting. Redwood is placed in the first group which contains those woods "that hold paint longest and suffer least when protection against weathering becomes inadequate."

The principal reasons why redwood is a good material to hold paint or finish coatings are its uniform texture; lack of resinous or oily properties; small shrinkage; and the fact that it contains certain ingredients which are conducive to paint holding.

Redwood has a peculiar uniformity of structure because there is not the marked difference between the summer wood and spring wood that exists in certain other conifers. This uniformity tends to give good anchorage on both summer wood and spring wood, without the conspicuous flaking that is apt to occur when summer wood is dense and horny compared to spring wood.

Redwood is free from objectionable resinous and oily ingredients which tend to disturb the bond of a paint or finish coating, or which may subsequently exude through the surface.

The small amount of shrinkage and expansion in redwood means a minimum of movement in the wood itself and a minimum of disturbance therefrom to the continuity of the paint film.

Certain extraneous constituents of redwood are, to quite an extent, responsible for the effect of good retention of paint coatings. Laboratory experiments involving the transference of these constituents of redwood to wood refractory to good paint retention improved the painting characteristics of the species tested.

Certified dry grades of redwood uppers are particularly good for painting or finishing. Seasoned with a consideration of the moisture equilibrium reached by wood in the territory where it is used, means a minimum movement in the wood in the climatical changes that prevail. This contributes materially to paint retention.

Redwood requires neither special treatment for painting nor any special painting system. The standard formula for white lead in oil paint that is used on all softwoods is applicable to redwood. Manufacturers' directions for applying high grade mixed paint are standard on redwood.

Because of the pleasing figure and color of redwood, very attractive effects may be secured with natural finishes.

For exteriors, dull or flat finishes may be obtained by transparent stains. Some of these may be varied off the natural by the addition of a very slight amount of pigment giving a light whitish, grayish, or greenish effect on the spring wood, with the summer wood retaining the natural redwood color. Glossy natural finishes may be obtained by standard brands of varnishes or oils. Linseed oil by itself should be avoided because of its tendency to darken after a period of exposure. Bleaching oils, also available, give a slightly weathered effect.

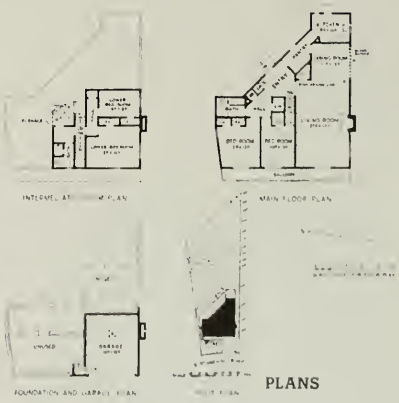
A few of the transparent stains used for exteriors are also used on interiors. Wax finishes are easily applied to redwood interiors; and are attractive and easy to keep clean. Varnish, lacquer, and enamel finishes are extensively used and are easy to apply in accordance with manufacturers' directions. A modern trend for interiors is to use bleached effects. Redwood responds readily to the commercial types of bleaches. Over these bleached surfaces can be applied enamels or acid stains producing very unusual effects.

HOUSE FOR LAWRENCE STRAUSS, BERKELEY

GARDEN VIEW

FRONT, HOUSE FOR MR. AND MRS. LAWRENCE STRAUSS, BERKELEY, CALIFORNIA

Located in the Berkeley hills, the site offered particularly difficult problems due to its steepness. By placing the living rooms on the top floor and the entrance at the side, full advantage was taken of the view of San Francisco Bay. Successively diminished in area, the three levels accommodate themselves to the slope of the plot.



PLANS

Above: Carved lintel over entrance of Medical Building, Carmel, California. Note lack of checking or shrinkage, in spite of the fact that no finish has been applied. Left: Congregational church at Niles, California, George Patton Simonds, Architect. Redwood lectern, altar, and cross, with redwood burl panel behind.

REDWOOD ADAPTABLE TO WESTERN STYLE OF ARCHITECTURE

By FREDERICK HAMILTON

THAT redwood lends itself splendidly to modern design is evidenced in the accompanying photographs of interiors, particularly those on pages 22 and 23. They give one a good idea of the versatility of California redwood as an interior finish.

And here it would seem timely to call architects' attention to the wide range of charming finishes that are possible with redwood. Its pleasing color and grain make the material particularly desirable for paneling.

Research carried on by redwood producers and paint manufacturers has brought forth a number of finishes which tend to relieve both any darkening of the wood due to weathering and susceptibility to marring.

As might be expected, redwood has found its way into buildings of unusual charm and merit. As the present western style of architecture has spread East, redwood has gone with it as a favored material of construction. Work by the late, great Joseph Urban and such outstanding modernists as Frank Lloyd Wright, Walter Gropius, Marcel Breuer and others may be cited as examples, although perhaps it was the work of our own Bernard Maybeck which first showed so engagingly the variety of uses to which the wood could be put. Architects who saw the New York World's Fair have been favorably impressed by the use of redwood for the exterior covering for the Contemporary Arts Building, where its weathered color provides a background for metallic murals.

The technical service bureau of the California Redwood Association has available a useful information sheet on "Interior Finishes," listing a dozen or more finish formulae, of which the following have proved the most popular with architects and builders.

INTERIOR FINISHES

The following is recommended finish for interior redwood that can be applied by the average mechanic. This finish retains the natural color of the wood and creates a surface that will give long service.

The wood surfaces should be thoroughly sandpapered with very fine finishing sandpaper and all discolorations removed.

Nail holes should be puttied with a prepared putty to match the color of the wood. There are putties marketed that may be used, or putty may be prepared by accumulating the dust from sandpapering redwood and mixing with LePage's glue and when of the proper consistency, applied to all nail holes. After hardening, the surface around the nail holes should be lightly sandpapered. Any putty containing oil will have a tendency to create a discoloration around the nail hole.

Beeswax. Thoroughly mix two pounds of beeswax in one gallon of hot turpentine until the beeswax is entirely dissolved. (As turpentine is extremely inflammable, extreme care should be taken. This preparation should be kept at a uniform heat during application.

Apply material with a soft cloth, rubbing with the grain. (May also be applied with a brush and lightly rubbed down with a soft cloth.)

Allow to dry for 48 hours. Then apply a coat of any white prepared wax and when dry polish with a soft cloth.

Rotten Stone: Slash grain redwood. This is a simple two-coat finish, two different tones. First treat the wood with the acid stain; let dry. Then given a coat of dry color wax stain. Made with flat white under coat and thinner with a little oil and Japan added, also some rotten stone and dry green seal zinc; tone with dry color to the shade desired. Work into the mixture quite a lot of Old English wax, about 2½ pounds to the gallon. Put on the woodwork, let set a while and wipe up with rags. Let dry for 24 to 48 hours, and then polish with fine double O steel wool. Many architects prefer the dull tones for their interiors to the higher polishes.

Because the beauty of interior finish is a mattor of individual judgment and taste it is safest to try the finish first on a sample panel before applying it to the wall.

NATURAL EXTERIOR FINISHES

The following recommendations for natural exterior finishes on California Redwood are offered by the paint companies noted:

Samuel Cabot, Inc.: Have three products ordinarily used and they recommend their Nos. 210, 241 or 247.

No. 230 is a natural colorless transparent stain. No. 241 is a bleaching oil, giving a slightly bleached effect to the wood. No. 247 is a bark stain, tending to give the natural bark color. Slight variations can be secured by using one coat of one specification, with the second coat of another specification. These products may be applied by brushing or spraying, but are usually brushed. Two coats are recomemnded, and they figure coverage on the basis of two coats. This coverage is approximately 150 square feet per gallon, including both coats. Drying time is approximately one day.

Dupont & Co.: Recommend their "Old English Paint Oil." It is applied either by brushing or spraying and preferably two coats for maximum protection. The coverage is above 500 square feet per gallon. Drying time is one day.

W. P. Fuller Co.: Recommends the use of two coats of "Fuller's Logwood Oil." In application, the coating should be well brushed out, so as not to dry with too much oil on the surface. A thin coating is specified as being more durable and retaining to better advantage the required semi-gloss in natural color. The coverage is above 250 square feet per gallon. Drying time is approximately one day.

General Paint Corporation: Recommends their "Clear Redwood Finish L-321." It must be applied with a spray gun. It darkens the wood a very little. The coverage is above 250 square feet per gallon. Drying time is approximately 45 minutes.

R. N. Nason & Co.: Recommend their "Clear Log Wood Finish." Used either as a two coat or three coat job as desired. First coat should be reduced about 25 per cent with pure turpentine or any good grade of paint thinner, preferably Nason's Purpolo. If a two coat job is used, the second coat should be put on straight or reduced just enough to permit free brushing. Should a three coat job be used, the second coat should be thinned approximately 20 per cent with the same thinner as mentioned above, and the finish coat should be applied the same as recommended for the second coat on a two coat job. The coverage is approximately 500 square feet per gallon. Drying time is 48 hours.

Paraffine Companies: Recommend their Pabco Marine Spar Varnish No. 876 as a clear varnish. Two coats are always specified, with the first coat thinned about 25 per cent with turpentine. The coverage is about 250 square feet per gallon. Drying time is overnight.

Pittsburgh Plate Glass Company: Recommends their "VD-2113 Clear Exterior" as a durable, clear transparent coating. One coat may be used as a sealer, but for maximum durability two coats are suggested. The coverage is above 250 square feet per gallon. Drying time, overnight.

Pratt & Lambert, Inc.: Recommend their "Okene Exterior Penetrating Stain." Gives transparent clear finish with soft pleasing sheen. May be applied by spray or brush, but brushing preferable. The coverage is about 400 square feet per gallon. Drying time is 48 hours. Two coats are recommended. They also recommend "Okene Exterior White Penetrating Stain, Effect No. 724." This stain reveals natural figure of redwood and gives a lighter reddish cast to wood than natural. Gives very pleasing effect with soft sheen. May be applied by spray or brush, but brushing preferable. The coverage is about 400 square feet per gallon. Drying time is 48 hours. Two coats are necessary for this effect.

Sherwin-Williams Paint Company: Recommends the use of "S-W Rex Spar." Not less than two coats should be applied, with the first coat reduced by a small amount of turpentine, and the second coat applied straight. For best and most durable finish, a third coat is recommended. Coverage is above 250 square feet per gallon. Drying time is about one day.

CALIFORNIA REDWOOD ASSOCIATION

Most of the larger redwood sawmills are members of the California Redwood Association, located at 405 Montgomery Street, San Francisco. It is not organized for commercial transactions, but refers inquiries to its members. This association has achieved renown for its years of progressive service. As a representative of the redwood industry it has closely cooperated with the United States Forest Service with regard to studies on redwood-timber growing, logging practices, and technical research on the properties and uses of redwood. From the consumers' point of view it has developed numerous booklets outlining in detail the proper specifications of redwood for many purposes. In this connection the California Redwood Association was one of the first to adopt grading rules and specifications conforming to American Lumber Standards as set up by the United States Department of Commerce.

The Association maintains a corp of experienced inspectors who supervise the grading at member mills and are available for official Association inspection from any Redwood producer. The inspectors are also available to personally inspect and issue certificate of grade at any Redwood mill when so desired by either the purchaser or producer.

The California Redwood Association is a member of the National Lumber Manufacturers' Association, with headquarters in Washington, D. C.

SIERRA UNION HIGH SCHOOL, FRESNO COUNTY, CALIFORNIA
Franklin and Kump, Architects

With U-shaped plan, plentiful use of glass, shaded by deep overhangs, the building affords a workable, informal, yet efficient school plan. Between-class traffic is handled by wide porches. Exterior walls are of clear all heart grade redwood.

Photo by Esther Born

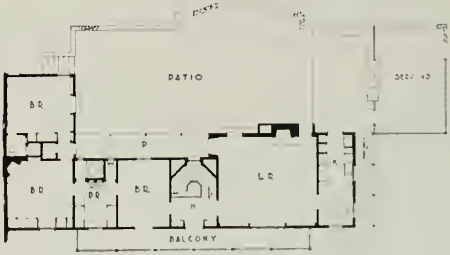
HOUSE FOR MR. & MRS. F. K. MURRAY

FRONT VIEW

FIREPLACE DETAIL

ENTRANCE DETAIL

RUMPUS ROOM, HOUSE FOR MR. & MRS. F. K. MURRAY, MONTEREY, CALIFORNIA



PLANS

Particularly interesting is the fact that all woodworking details in the Murray house were taken from measured drawings of old Monterey houses, made by Mr. Stanton. Like their prototypes, all sash, trim and exposed structural members are redwood, as are the panelled walls of the living room and natural finished shutters.

HOUSE FOR E. G. MAYHEW, OAKLAND

PATIO

CORNER OF LIBRARY

PLAN

CLARENCE W. MAYHEW, ARCHITECT

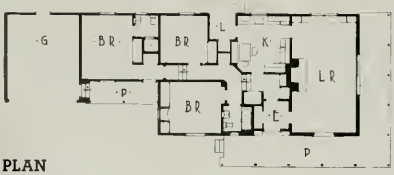
BREAKFAST NOOK

Built on a sloping lot overlooking San Francisco Bay, the house commands a sweeping view. For this reason, large areas of glass are used for the southern and western exposures. Anzac pattern Redwood siding is used for exterior walls. Its heavy shadow line gives further emphasis to the horizontal feeling of the house. Both siding and trim are painted grey-green, with shingles left natural. Twelve-inch untreated redwood is used horizontally for walls of living room, dining room, and study, which may be thrown together for entertaining.

HOUSE FOR HAROLD GEYER, MONTEREY, Robert Stanton, Architect

GARDEN VIEW

LIVING ROOM

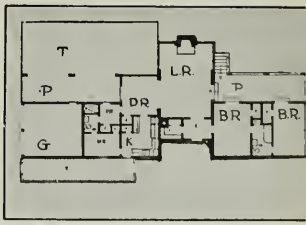


PLAN

HOUSE FOR MRS. DIANTHE MILLER, CARMEL, CALIFORNIA

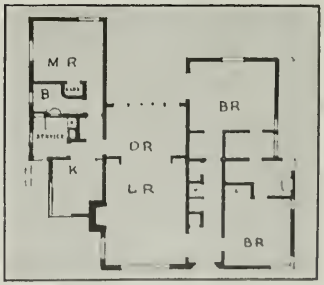
William W. Wurster, Architect

Exterior in redwood siding, No. 373



HOUSE IN SOUTHERN CALIFORNIA

Robert H. Ainsworth, Architect

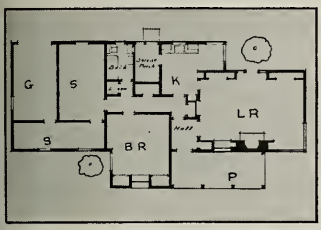


HOUSE IN MARIN COUNTY, ARTHUR LAMB, ARCHITECT

Photo by Van Eckhardt

Exterior is Redwood rough-surfaced bevel siding, finished in a rubbed grey stain to emphasize the grain. Flat white trim, natural thick-butted shakes and rough brickwork complete its color scheme. Siding pattern is Redwood number 392.

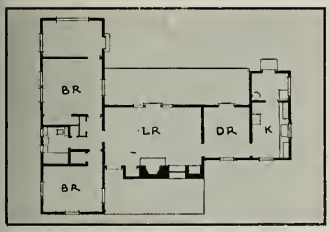
A Group of Southern California Homes



THE PLAN

THE HOUSE

The five small houses on this page, gathered from Southern California, are typical of the western approach to this, the most interesting current design problem.

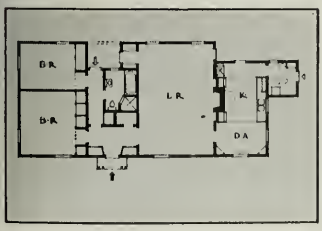


THE PLAN

THE HOUSE

Coast architects have developed the open, one story, plan in contrast to the East's story-and-a-half or two story house.

Redwood has been a favored material due to its low shrinkage and high insulating value.



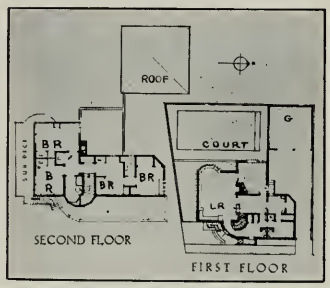
THE PLAN

THE HOUSE

BEACH HOUSE IN SOUTHERN CALIFORNIA

GORDON B. KAUFMANN, ARCHITECT

With flying bridge and port hole windows, there is ample protection when high winds blow.



PLANS

RUSSIANS BUILT FORT ROSS CHAPEL OF REDWOOD IN 1811

ONE of the most interesting examples of the early use of redwood for building is the historic chapel which dominates the old Russian settlement (now Fort Ross) 18 miles north of Bodega in Sonoma County, colonized by the Russians in 1809.

The Spanish were soon advised of the founding of the Russian colony and of its activities. To the first Spanish party of investigation which arrived at Fort Ross, the Russians explained the trade benefits which would be derived by the Spanish from the colony. The Spanish were encouraging.

Governor Arrillego was even friendly enough to permit trade, although Russian vessels were never allowed to enter San Francisco Bay.

In 1813, Arrillego died. The next Spanish governor, Jose de Arguello, was unfriendly toward the Russians and demanded that Kuskof, the Russian governor, evacuate the colony immediately. Pablo Vincente de Sola, who replaced Arguello in 1815, was even more hostile. General public opinion, however, had recognized the Russians as being not undesirable neighbors. The Spanish sent several deputations to Fort Ross to protest against the illegal settlement, but the Russians employed a method of passive resistance to the demands to vacate. The Spanish officer would make his official demand. The Russian governor would reply that he could not act without the permission of his government and that the matter would be referred immediately to the Czar. This disposed of the business at hand. The visiting party would then settle down to enjoy the Russian hospitality.

Describing the Russian colonization in a recent article in the Federal Architect, Clarence E. Clar gives the following interesting facts about the construction of the fort and group of buildings:

"In constructing Fort Ross, the Russians enclosed a rectangular plot of ground, containing about two acres, with a stockade. The

RUSSIAN CHAPEL AT FORT ROSS, SONOMA COUNTY, BUILT OF REDWOOD 121 YEARS AGO AND STILL WELL PRESERVED

length of the enclosure was 312 feet and the width 228 feet. The length followed the contour of the hillside and the angles of the stockade were placed very nearly on the cardinal points of the compass. The northern and eastern angles were on the uphill side and directly between them was the governor's house. It faced the large pair of swinging gates in the center of the downhill side of the stockade, which formed the only entrance to the enclosure. The edge of the ocean cliffs were a short distance away from this downhill wall.

"The walls of the stockade were constructed of riven redwood timbers, eight inches thick and twelve feet high and provided with occasional openings for cannon. The timbers were securely bedded into the ground and braced from the inside. At the north and the south angles of the stockade were constructed octagonal bastions, each about twenty-five feet in diameter and two stories high, with conical roof and flagstaff. The walls of these bastions

were formed of hewn redwood timbers, eight inches thick, and nicely mortised at the corners. They were each furnished with six cannon. The walls of the stockade connected with the bastions in such a way that three sides of the octagonal structure remained within the stockade enclosure. The eight walls of the bastions each had two loopholes, one for each story height. One loophole was placed in the heavy entrance doorway. They were thus arranged so as to be able to bring all within the stockade under the range of cannon and muskets. The pieces of artillery could easily be shifted from the outside embrasures to the ones on the inside walls in case it became necessary to quell a mutiny, or to withstand a treacherous attack by natives. The stockade was believed to be practically invulnerable against any implement of assault likely to be brought against it in those days.

"It is an interesting fact that most of the cannon and muskets employed by the Russians in this fortification were French weapons abandoned by Napoleon's army in the retreat from Moscow, in 1813.

"Near the stockade wall which connected the north and west corners of the enclosure were two buildings. One was a roughly constructed two story building, twenty-eight feet by eighty feet in plan. It was used as a barracks by the men of the garrison. The other was a one story building, twenty-nine by fifty feet in plan, very well constructed. It was used for officers' quarters. Along the lower side of the enclosure were other one story buildings. They were warehouses for provisions and supplies, the kitchen and well house, and the jail.

"At the eastern corner of the stockade was constructed the chapel. It was twenty-five feet by thirty-one feet in plan, and strongly built. Two of the walls formed the corner of the stockade. These walls were pierced by loopholes for cannon. The entrance to the chapel faced the governor's house. There was a vestibule about ten feet by twenty-five in size; thus leaving the auditorium, twenty-one feet by twenty-five feet, where comfortable benches were placed for seats.

"Directly over the entrance end of the building was the belfry tower, hexagonal in plan, with the six sided peaked roof terminated by a Greek Catholic cross. In this were beautifully toned bells. Over the center of the auditorium occurred a cylindrical dome-like structure having a curiously shaped roof. Instead of a gable at the end of the chapel opposite the belfry, the roof sloped sharply back. The entire chapel was lighted by four large windows, evenly spaced, on the downhill side of the chapel.

"Practically the entire building, including the roof, was made of long planks, either sawed or riven from redwood. A considerable degree of carpenters' skill was displayed. Mouldings were provided for the inner door and window casings; an attempt was made at a cornice around the exterior of the building.

"Perhaps the most interesting characteristic of the chapel was the attempt of the Russians to create the forms of the traditional multiple domed church architecture of their home land with the limitations imposed by the materials at hand. Their compromise with the use of straight splitting redwood resulted in the pair of curiously formed cupolas which crown the edifice."

ABOVE: ROOF OF INDIAN HOUSE
THE PICTURE ON THE RIGHT (OVAL) IS AN ENTRANCE DETAIL

YUROK TRIBE BUILT ITS HOUSES OF REDWOOD IN EARLY DAYS

ANOTHER impressive example of the early use of redwood and its wonderful lasting qualities is seen in the accompanying photographs of an Indian house built by the Yuroks in Northern California over 100 years ago. A. L. Kroeber, in his handbook of the Indians of California, describes this unique abode in part as follows:

"The Yurok house is built wholly of redwood planks split from logs with wedges and more or less adzed. It contains no posts and no beams. The roof planking is supported by three or four plates that rest on heavy planks in the front and rear walls. Two of these plates run near the side walls; the others form ridgepoles. The usual house has two ridges and three roof slopes, the middle one not quite level. A single-ridged house is to the Yurok a sign of the owner's poverty; he builds only three fathoms wide; a well-to-do man, four. Actual frontages by measurement are 17½, 19, 20, 21½ feet. The depth is about a yard more. No houses surpassing or falling short of these figures by more than a foot or two were built. The walls are of planks set endwise in the ground, usually two rows thick. Little care is given the side walls, which are only a few feet high and protected by the overhanging eaves. For the front and rear, splendid solid planks from 1 to 4 feet in width are sometimes used. In the middle of the wall they may rise 10 or more feet. The boards in each wall are held together by two squared poles, one inside and the other out, lashed together with grapevine or hazel withes passing through holes in several of the boards. The plates, which often project several feet, rest in rectangular notches cut into planks of particular strength. The roof boards are as thin and wide as they can be made and from 8 to 10 feet long. They are merely laid on in two overlapping thicknesses. The lower ends are often not squared, and weather and split off irregularly, giving the Yurok house a very untidy look in our eyes. The smoke hole is made by laying aside a board in the middle. In rainy weather this leans over the opening, propped by a stick set at an angle.

"A refinement is introduced by gouging a gutter along the edges of the two boards bordering the smoke hole, to prevent side flow into the opening. The smoke hole is never used as a door but it serves as the only window. Measuring about 2 by 7 feet, it admits a little shifting sunshine and a fair illumination to the middle of the house, but this remains cool in midsummer. It darkens early, and the corners are dim and musty at noon. A short log ladder with cut-in notches usually gives ready access from the ground to the roof when the smoke-hole plank is to be shifted or a leak repaired by an adjustment of boards.

"The door (see picture) is a round hole about 2 feet in diameter, cut a few inches above the ground through a plank of exceptional breadth and thickness. This plank is always near one end of the front wall. Two stones are planted as convenient grips just inside and often outside the entrance. The door proper is a plank that slides in a groove—often a piece of gunwale of an old canoe—and is held upright by two stakes. It can be tied but not locked. The plank in which the hole is cut is sometimes ornamented in geometrical relief.

"Just inside the door a partition extends nearly across the house 3 or 4 feet parallel from the front. The blind alley thus formed serves for the storage of firewood, and is often littered with carrying baskets and rubbish. This narrow compartment about takes up the excess of the length of the house over the breadth. The square remainder of the interior is on two levels. The center, for about half the diameter of the whole area, is dug out from 2 to 5 feet. The surrounding shelf, some 5 or 6 feet wide, is at the natural level of the ground, or substantially so. The central depression is the cause of the pits that mark the sites of ancient houses. It is entered by a notched ladder sometimes as much as 2 feet wide. A second ladder may stand at the far corner from the door, for convenient access to the farther sides of the shelf. The corners of the pit are always cut off, sometimes to such a degree as to make it more nearly a regular octagon than a square. The sides of the pit are always carefully lined with thin, even, and smooth slabs. These may reach a breadth of 4 feet. In the middle of the pit is the fireplace, a shallow excavation usually bordered by five stones. Above it, at less than a person's height, hangs a huge criss-cross of several tiers of poles in squares, on which salmon sides and other provisions are suspended."

REDWOOD ABROAD

Redwood has been exported to foreign countries for a great many years and more recently has been exported to practically every civilized country in the world. While the most important redwood markets are Australia, Union of South Africa, New Zealand, Panama, Canada, Cuba, Mexico, France, the United Kingdom, Salvador, Argentine, Peru, and Germany, smaller shipments are made to many other countries such as Iraq, British India, Netherlands Indies, Bolivia, and British and French Oceania.

In the primeval jungle swamps of Sumatra where conditioins are favorable to decay and insects, oil companies have erected offices and homes of redwood. In many Central American countries redwood has been used for many years, particularly in the construction of dwellings for banana and coffee plantations. The principal railway system of Peru has used redwood ties for almost one-third of a century. In Europe redwood is used principally for high class interior work, for wall paneling, and for industrial tanks. Australia, which is a particularly large consumer of redwood, uses it principally for home construction. In South Africa it is used for the construction of cooling towers, for mine shafts, tanks, and for housing.

Lasting Qualities of Redwood Make It a Desirable Building Material

By B. F. WADE, C.E.

THE world wide usage of redwood is attributed to the fact that it combines to a high degree the essential properties which assure lasting construction. Relatively high mechanical properties, medium weight, low shrinkage, ease of working, and high resistance to decay make redwood a desirable material for special as well as ordinary uses, give it a high utility value in the engineering and construction field.

The economic use of lumber demands design practices based on scientifically ascertained facts. The U. S. Forest Products Laboratory has been making tests on lumber of various species for over 25 years. Recommended working stresses are published by them and architects and engineers may safely be guided by their findings. Structural grades having definitely assigned stress values are available in redwood.

A characteristic of redwood is that it is higher in such properties as bending strength, crushing strength and hardness than would be expected from its specific gravity. This is simply an indication of equivalent strength at lighter weight than prevails in most species. This means a saving in dead load with the use of redwood — an important factor in many designs.

Individual pieces of redwood vary less from the average value in stiffness, hardness, and shock resistance than the average of other conifers. In certain conifers there is a pronounced difference between the hardness of spring and summer wood, permitting marked variation in face hardness at close intervals. There is not this marked difference in redwood, giving it a more uniform character.

Redwood has the lowest volumetric shrinkage of any commercial American species. This not only contributes to appearance and integrity of design but it means a minimum of checking. The general effect of checking is a reduction of strength through the over-stressing of some of the fibers before others, resulting principally in a reduction of shearing strength.

Timber used under wet or damp conditions is subject to possible deterioration from decay. Decay results in a decrease of strength properties. Redwood, when used under wet and dry conditions, resists decay for a long period of time. Therefore, original factors of safety are maintained for a much longer period than in woods not having the same high decay resistance.

EARLY USE OF REDWOOD

Redwood has been successfully used in the engineering and construction field for over 80 years. The earliest tank installations of which there are records date back about 85 years. Redwood has now become one of the important tank woods of the world.

The use of redwood for flumes and pipe lines dates back to the early mining days of California. Modern reservoir roofs are made of redwood.

Redwood has been extensively used for bridge construction, culverts, and tunnel construction, the earlier installations being made over 75 years ago.

Cooling towers made of redwood are installed in many parts of the world.

Many of the major stadiums of the United States have redwood in their construction.

Industrial plants, such as paper mills, textile mills, and finishing plants, have used redwood for almost 30 years for roof construction in highly humidified rooms.

HOUSE INTERIOR SHOWING ENTRY HALL, WITH LIVING ROOM BEYOND AT LEFT, AND KITCHEN AT RIGHT

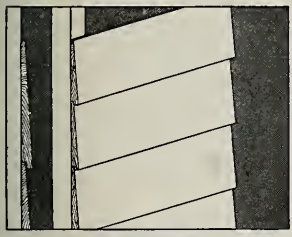
Loy Chamberlain and Vincent Raney, Architects; Elizabeth Banning, Color Consultant

Random width vertical redwood boards with v-joints are used for wall covering in the entry. Redwood plywood with battens and coffered ceiling in living room. The finish for both consisted of two coats of bleach, light grey stain and rubbed wax.

STYLE SHEET OF PATTERNS OF REDWOOD SIDING

ANZAC SIDING

Surfaced four sides.
Widths: Pattern 440, 8 in.; pattern 441, 10 in.; pattern 442, 12 in.
Thickness $\frac{25}{32}$ in.
Laid with 1¼ in. lap. Weather groove, and spacing line.
To determine exposure deduct 1¾ in. from nominal size.



RABBETED BEVEL SIDING

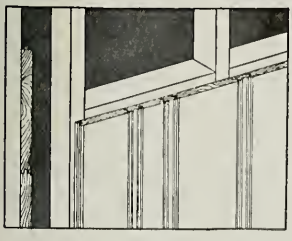
Surfaced face—
Widths: Pattern 360, 4 in.; pattern 362, 6 in.; pattern 363, 8 in.
Butt Thickness ½ in.—tip $\frac{3}{16}$ in.
Widths: Pattern 370, 4 in.; pattern 371, 6 in.; pattern 372, 8 in.; pattern 373, 10 in.; pattern 374, 12 in.
Butt Thickness $\frac{11}{16}$ in.—tip $\frac{3}{32}$ in.
Widths: Pattern 375, 8 in.; pattern 376, 10 in.; pattern 377, 12 in. (Called "Mt. Vernon" in these sizes.)
Butt Thickness $\frac{23}{32}$ in.—tip $\frac{3}{8}$ in.
Exposed Width 1 in. less than nominal.
Rough face—
Widths: Pattern 380, 4 in.; pattern 382, 6 in.; pattern 383, 8 in.
Butt Thickness $\frac{5}{8}$ in.—tip $\frac{3}{16}$ in.
Widths: Pattern 390, 4 in.; pattern 391, 6 in.; pattern 392, 8 in.; pattern 393, 10 in.; pattern 394, 12 in.
Butt Thickness ¾ in.—tip $\frac{3}{32}$ in.
Widths: Pattern 395, 8 in.; pattern 396, 10 in.; pattern 397, 12 in. (Called "Mt. Vernon" in these sizes.)
Butt Thickness $\frac{25}{32}$ in.—tip $\frac{3}{4}$ in
Exposed Widths 1 in. less than nominal.

V RUSTIC SIDINGS

S4S Shiplap.
Widths: Patterns 290 and 300, 6 in.; patterns 291 and 301, 8 in. (Also center V.)
Thickness $\frac{7}{8}$ in.
Widths: Pattern 292, 4 in.; patterns 293 and 303, 6 in.; patterns 294 and 304, 8 in.; pattern 295, 10 in.
Thickness $\frac{25}{32}$ in.
Exposed Width 1 in. less than nominal.
Also 6 in., 8 in., widths $\frac{33}{32}$ in. thickness.
T&G—V and Center V (patterns 116 and 116½).
Shiplap (Plain S4S)
Widths: Pattern 260, 4 in.; pattern 261, 6 in.; pattern 262, 8 in.; pattern 263, 10 in.; pattern 264, 12 in.
Thickness $\frac{25}{32}$ in.
Exposed Widths 1 in. less than nominal.

CHANNEL RUSTIC SIDINGS

S4S.
Width: Pattern 273, 10 in.
Thickness: $\frac{25}{32}$ in.
Exposed Width 1 in. less than nominal.
See also "Wall Boarding."



WALL BOARDING (Board & Flush Batten)

T&G (S4S) (for vertical or horizontal application).
Board Widths: Pattern 529, 6 in., 8 in., 10 in., 12 in.
Batten Widths: Pattern 529-A, 3 in.; pattern 529-B, 2 in.
Thickness: $\frac{25}{32}$ in.
Exposed Width for one board and one batten 1¼ in. less than nominal.

REDWOOD GRADES — FOR ARCHITECTURAL USE

THESE GRADES ARE FOR SIDING, PANELS, MILLWORK, INTERIOR AND EXTERIOR TRIM

Clear All Heart Grade—The highest grade of lumber manufactured in California Redwood; a super grade, higher than any called for by American Lumber Standards. It is well manufactured from sound, live, all heartwood, and is selected for texture, appearance, milling and working qualities, as well as for freedom from sapwood and knots. It may be used with confidence for the most exacting purposes.

"A" Grade — Practically free from knots and other defects. It may contain a small amount of sapwood and individual boards may vary in texture, grain and appearance. It is suitable for natural finish where variations in color and appearance are desired, and for high quality painted exterior and interior trim, including sidings, rustic, ceiling, partitions and mouldings.

"B" Grade—Admits sapwood, discoloration, birds-eye and occasional small tight sound knots. It is entirely suitable and practical for paint finishes, and natural finishes where variations in color and pattern are desired.

THESE GRADES ARE FOR FRAMING, SHEATHING AND OTHER USES

Foundation Grade—Grade marked lumber selected from No. 1 Heart Common for characteristics which ensure high resistance to decay and termite attack, and durability under severe service conditions.

No. 1 Heart Common Boards and Dimensions—Well manufactured from sound live heartwood, and are recommended for use where strength and lasting qualities, rather than appearance, are important. This grade is also recommended for purposes where durable utility lumber is desired and for applications such as use in contact with the soil or exposed to the elements where high resistance to decay and insect attack is essential.

No. 2 Common—Suitable for use in ordinary construction and is available in the same sizes and workings as No. 1 Heart Common up to 6x8 in. Occasional knotholes, shakes, checks and sapwood are permitted. Maximum knot sizes are limited to 2 in. in the narrow widths and $3\frac{1}{2}$ in. in the 12-in. boards.

No. 3 Common—The lowest grade manufactured in Redwood and is practically all marketed in local territory. It is suitable for temporary construction and for many uses which are not exacting.

VALUE OF ARCHITECTURAL SERVICES TO A COMMUNITY

By BEN H. O'CONNOR, A. I. A.

TOO much stress cannot be laid upon the value of complete professional architectural service in the building of a house. By this means and by this means only can the owner, the contractor and the lender be assured of the successful culmination of their efforts. By this method, also, the community is assured of the greater beauty and more permanent usefulness of its institutions.

The architect has devoted years to special training in planning and design. As a result, he has expert knowledge of materials and methods of construction. He is unbiased by commercial considerations when passing upon the quality of materials and methods of construction. It is because of this knowledge and ability that he is able to create successfully a structure of lasting usefulness and beauty.

To the home owner complete architectural service means many things. First of all, it means that his home will be planned to satisfy the needs of himself and his family. It means that the best disposition of his building site will be attained; that greatest advantage will be taken of the factors of orientation, topography, prevailing winds, soil and drainage. It means that his home will be attractive and well designed throughout, so that his satisfaction of ownership will increase with the years. Complete architectural service assures fair prices by affording the basis of fair competition and it ensures the standards of quality stipulated by the contract; in other words, the owner receives what he pays for.

To the contractor, complete architectural service provides the means of fair competition with other contractors and among the sub-contractors on whom he depends. Complete plans and specifications relieve him also of the burden of developing a multitude of construction details, at a consequent saving of time and money. It means, as well, that the contractor enjoys the protection of just interpretation of the contract to the mutual benefit of both the owner and himself. Finally, complete architectural service means that the contractor, by co-operation with the architect, is enabled to produce results in which he may take justifiable pride.

To the lender who provides the funds which make possible the construction of the building, complete architectural service means added security for his loan; security in far greater degree than its cost would indicate. Good planning and design mean a minimum of obsolescence; the specification of proper materials and good building practices mean a minimum of depreciation, and careful supervision ensures that full value is received under the contract.

The community benefits from all of these factors. It cannot survive without beauty, which the architect contributes. It cannot protect its health and safety without careful planning and good construction, which the architect is trained to furnish. Finally, it cannot grow without the permanence of values created largely through the medium of efficient architectural service.

EDITOR'S NOTE: Mr. O'Connor is secretary of Southern California Chapter, American Institute of Architects.

WARM AIR HEATING BY FORCED CIRCULATION

IN the general confusion surrounding the subjects of heating and air conditioning, warm air heating by forced circulation is a white hope for architects, builders and owners. In 1930, it was practically impossible to heat an entire residence uniformly and quickly. The gravity system could not handle long ducts successfully, nor even assure uniform temperature conditions in a single room. Now, uniform central heating is an accomplished ideal, largely through perfected forced circulation of gas-fired warm air, and regardless of the number of rooms or length of ducts. It has come about through intensive research on the part of furnace manufacturers and the American Gas Association.

Forced air, by use of the centrifugal blower in conjunction with the furnace, makes it possible to control the heated air after it leaves the furnace, besides providing filtering and summer circulation. Long ducts hold no problems for this positive control. Balanced warm air distribution, unaffected by outside conditions, can be secured even in rooms furthest from the heating plant.

Uniform temperatures within rooms is also affected by the type and location of registers. Forced air registers used today are almost all fitted with horizontal louvres so that the air may be directed upward, horizontally or downward at will. Vertical fins are also in use, so that the air may be directed to one side or the other, or diffused, according to the particular need. Whatever the type of register used, forced air gives the necessary positive control to eliminate heat stratification.

Humidity control, still an argumentative subject, is easily possible with gas-fired forced air heating. While moisture content may not have a direct bearing on health, it certainly affects human comfort, and will undoubtedly be given more attention.

Starting with heat loss calculations for various rooms, the approach to a heating installation is more logical and scientific today. Furnaces are more accurately sized, highly important in efficient operation, for each cubic foot of air carries a definite amount of heat.

Cold air returns are now widely used as a means of controlling circulation of air within the rooms, but not to any great extent in California.

Compactness and a complete system of automatic controls characterize the best forced air gas furnaces, the thermostat operating directly on the main burner gas valve. Most people who attempt to control furnaces manually do a sorry job of it, their thoughts usually being absorbed elsewhere. With the thermostat, various rooms can be keyed to the one being controlled. A high limit switch to interrupt the control circuit in case of overheating, a safety pilot, a pressure regulator and a relay complete the usual controls. Every contingency is provided for and the furnace operation rendered entirely automatic—a far cry from the heating system of only ten years ago.

The vertical or closet type unit, with blower underneath and heating element above, is an important advance in gas furnace design. It can be installed at any point in the house; in mild climates, where basements are rare, this advantage is obvious.

Filtering is usually provided for in the modern forced air gas furnace. Anyone who has seen a dirty filter removed from a furnace will quickly grasp the desirability of this simple method of air cleaning.

Summer circulation of fresh filtered air by use of the blower alone is another boon to comfort and health. This air, if taken from underneath the house, will generally be slightly cooler than outdoor air. This cannot accurately be called air conditioning, but it is keeping thousands of homes comfortable during summer months. Addition of cooling to a forced air system is also a possibility. However, it should be engineered from the very first by competent technicians, as cooling and heating loads for a given house are different.

In the light of these developments for comfort heating, it is inconceivable that much new residential heating is actually inadequate, even obsolete. Cost is probably not the obstacle. Informed builders now think in terms of what it will cost **not** to have the full advantages of the best type of equipment. It is undoubtedly a matter of education, for architects and builders know that adequate heating is as much a part of integral design as any other feature of the house.

ANOTHER $20,000,000 CALIFORNIA PROJECT

Secretary of the Interior Harld L. Ickes has transmitted to the Congress the report of the Bureau of Reclamation on the Kings River Project in California, stating that it is feasible and recommending its construction under the Reclamation Law.

The irrigation, flood control and power development would cost an estimated $22,300,000, of which $9,950,000 would be allocated to irrigation to be repaid by water users on 800,000 acres of developed land near Fresno now in need of supplemental irrigation water; $9,950,000 would be allocated to flood control under a finding agreed to by the Corps of Engineers; and $2,600,000 would be allocated to power for repayment in 40 years with interest at 3½% from power sales. A connection with the Central Valley Project system would enable a desirable interchange of power.

The report contemplates construction of Pine Flat Dam, a concrete structure 413 feet high, which would impound 1,000,000 acre-feet of water; a power plant of a capacity of 15,000 kilowatts and transmission lines; and miscellaneous minor works. The report, in addition, recommends for future consideration, but not for inclusion in the initial unit of the project, a large power development on the North Fork of the Kings River.

With the Architects

HIGH SCHOOL FOR LAFAYETTE

Lafayette, a growing communitiy in Contra Costa County, near Walnut Creek, is to be the site of a group of school buildings for the Acalanes Union High School District and for which plans have been completed by Franklin & Kump of Fresno and E. Keith Narbett of Richmond. There will be class room units, gymnasium, shops, etc., all one story and covering a considerable ground area. The estimated cost is $230,000.

S. F. APARTMENT BUILDING

Plans have been completed in the office of H. C. Baumann, 251 Kearny Street, San Francisco, for a three story reinforced concrete 18 apartment building to be erected on the west side of Divisadero Street, near Jefferson, San Francisco, for Viggo Rasmussen of 3535 Fillmore Street. There will be a passenger elevator, steam heat and electric refrigeration. The estimated cost is $70,000.

RAY F. KEEFER BUSY

The office of Ray F. Keefer, 585 Mandana Boulevard, Oakland, has enjoyed a busy year thus far in 1940. Recent projects emanating from the Keefer office include a $13,000 residence in Oakmore Highlands for E. H. Adams and a one and two story frame lodge building in East Oakland for the Fraternal Order of Eagles. The lodge will spend $30,000 on the improvements.

OFFICE OF ALBERT H. LARSEN

New work in the office of Albert H. Larsen, 333 Kearny Street, San Francisco, includes a dwelling for the Ruegg Company on San Bruno Avenue, and office, sales, service and warehouse buildings in the block bounded by 13th, 14th, Folsom and Trainor streets, San Francisco, for J. A. Clark, 100 Howard Street, San Francisco.

CARMEL STORE BUILDING

A modern store building for growing Carmel is to be started as soon as weather conditions are favorable, at Sixth Avenue and San Carlos Street, for Mrs. Mary A. Goold. Plans for the $10,000 structure have been prepared by Guy O. Kroepp of Carmel.

BERKELEY $10,000 RESIDENCE

Edwin L. Snyder, 2104 Addison Street, Berkeley, has prepared plans for an eight room two story frame and stucco house for J. H. McCall, to be built on Shattuck Avenue, Berkeley, for J. H. McCall of 1904 Parker Street. Construction will be handled by Ed M. Sorensen of Berkeley.

EDWIN JOHN IVEY, JR., ARCHITECT

Edwin J. Ivey, Jr., architect of Seattle, Wash., died suddenly February 25. A native of Seattle, Mr. Ivey, after graduation in architecture from the University of Pennsylvania in 1910, entered with enthusiasm into the practice of the profession, establishing himself in his native city, where he applied his energy and talents to residential work. He won a distinguished place in his profession. His aesthetic sensibilities, so well expressed in the work he accomplished, were reflected in his studio surroundings, replete with treasures gained from foreign travel. Mr. Ivey was a member of Washington State Chapter.

E. P. WHITMAN

E. P. Whitman, 70, who had practiced his profession in Northern California for more than a quarter of a century, died at his home in Los Gatos, February 18, from a heart attack. He had been ailing for a year. A graduate of the Massachusetts Institute of Technology, Mr. Whitman studied in Europe, later being employed in the office of McKim, Mead & White of New York. For 17 years he practiced in Alameda County and one of his last commissions was the Hayward City Hall.

MEN'S DORMITORY AT U. C.

A new dormitory for men will be constructed north of the Greek Theater on the U. C. campus, from plans by William W. Wurster, architect of San Francisco. Funds for the building will be provided by the widow of the late Sigmund Stern, member of the University class of 1879. There will be $250,000 available.

REDWOOD CITY SCHOOL ADDITION

A five classroom addition will be built to the Redwood City high school from plans by Messrs. Blanchard and Maher, architects, 369 Pine Street, San Francisco. Construction will be of concrete with tile roof.

DOCTORS' OFFICE BUILDING

A physicians' office building of frame construction and stucco exterior will be built at Tenth and B streets Santa Rosa, for Dr. A. Thurlow of that city. Bids have already been taken from drawings by C. A. Caulkins, Rosenberg Building, Santa Rosa.

TACOMA SOCIETY OF ARCHITECTS

The Tacoma Society of Architects has elected W. W. Durham president and Earl Dugan vice president. Mr. Gove will serve again as secretary treasurer.

The meetings are held regularly at the University Union Club.

PERSONALS

Ellis F. Lawrence, senior partner of the firm of Lawrence, Holford & Allyn of Portland, Oregon, recently returned from Washington, D. C., where he was one of three judges of the competition for the Burlingame Post Office Building. En route, Mr. Lawrence visited his old home at Boston, Massachusetts.

Edwin C. Heilman, landscape architect of Seattle, has moved to new office quarters in Room 1306, Textile Tower.

Joseph L. Skoog, Seattle architect, has resumed downtown practice, with an office in the Colman Building.

E. Charles Parke has moved from 1 Fuller Building to 175 North Acacia Street, San Bernardino.

Kenneth A. Gordon announces the removal of his office from 175 East Green Street, Pasadena, to 2730 North Foothill Boulevard, Altadena.

Herman Charles Light, formerly located at 120½ South Sweetzer Avenue, Los Angeles, has moved his office to 6510 Drexel Avenue, Los Angeles.

Frederick Wallis Whittlesey, formerly of the firm of Janssen & Whittlesey, Phoenix, Arizona, is now practicing independently, his offices being located at 900 Security Building, Phoenix. Architect Otto W. Janssen is also carrying on a separate practice.

Gordon B. Kaufmann has been named chairman of a permanent research committee established by the Los Angeles Chamber of Commerce Construction Industries Committee.

COMPETITIONS

Closing date for the Sixth Regional Architectural Competition for a new Federal Office Building at Tacoma has been extended to April 20. The competition is open only to architects whose home offices are located in Oregon, Washington, Montana, Idaho, Utah, Wyoming and Colorado. It is estimated the new building will cost $300,000. The author of the winning design will receive $3000. He will also be paid an additional $3000 in his capacity as consultant to the Public Buildings Administration during the preparations of working drawings and specifications.

* * *

May 1 is the closing date for submission of plans in the international competition for the design of the proposed Presidential Palace at Kovno, Lithuania. The original date set by the Lithuanian government was November 1. Since Lithuania recently regained her old capital, Vilna, as the result of an agreement with Russia following the recent partition of Poland, the Lithuanian government will not build the proposed Presidential Palace at Kovno. Vilna has adequate public buildings. However, since the Lithuanian Senate has authorized the competition, appropriated the prize fund and deposited it in a bank, the contest will be held and prizes awarded.

L. A. BUILDING CODE

A joint committee to take up the proposed revision of the Los Angeles city building code has been formed, composed of Dr. Vern Knudsen and R. J. Daum, members, and Vivian Rapp, research engineer, representing the Board of Building and Safety Commissioners; Earl T. Heitschmidt, architect; Paul E. Jeffers, structural engineer; Ford J. Twaits, general engineering contractor; Loy F. Johnston, plumber, representing sub-contractors; H. B. Potter, clay products industry, representing material men; Frank J. Connolly, manager, Associated General Contractors, and Earl S. Anderson, secretary, Construction Industries Committee, Chamber of Commerce. At a meeting, February 2, the committee elected Dr. Vern Knudsen chairman.

OFFERS COURSE IN ESTIMATING

A new course, "Construction Estimates and Costs," of wider scope than a previous course of similar name, is offered by the Extension Division of the University of Wisconsin, Madison.

The course places emphasis upon correct methods of estimating the quantities and costs of materials, labor, and equipment required in construction work, the costs of overhead and allowances for profit. Both tables and diagrams are used. Many illustrative estimates are included.

The Department of Civil and Structural Engineering, upon request, will send detailed information on the course.

HUGE LOS ANGELES BALL ROOM

Gordon B. Kaufmann of Los Angeles has been commissioned architect of a huge public ball room, to occupy a five-acre site on the north side of Sunset Boulevard near the new plants of the National Broadcasting Company and the Columbia Broadcasting System, Los Angeles. The building will provide dancing space for 3,000 couples and will also contain ten stores and shops. The promoters have incorporated as Southern California Enterprises and are said to be prepared to spend $750,000 on the project.

L. A. CIVIC CENTER MODEL

Construction of a model of the Los Angeles Civic Center as now being planned by Southern California Chapter, American Institute of Architects, has been started under the direction of the Chapter committee in charge of the work, headed by Sumner M. Spaulding. Preparation of the plans for the Civic Center, making provision for proposed and future public buildings, is reported to be well under way.

SACRAMENTO ARCHITECT BUSY

Chas. F. Dean, architect of Sacramento, is making working plans for a $30,000 addition to the Yuba Junior College, Marysville, a fraternity house for the Phi Alpha Iota at Davis, and stage equipment for the High School assembly hall at Sacramento.

BETTER DESIGN FOR HOMES COSTING $5,000 OR LESS

A NATIONWIDE movement to raise the standards of design and construction of homes costing not more than $5000 will be carried out by the American Institute of Architects and the Producers' Council, in cooperation with the Federal Home Loan Bank Board.

A primary objective is to eliminate the risks which have caused widespread financial distress among home owners in the lower income groups, according to the announcement by Edwin Bergstrom of Los Angeles, president of the Institute. An all-inclusive building service protecting the small home owner will be extended to every locality in the United States.

"The poorly designed and poorly constructed houses which are being supplied annually in great quantities to small house owners are precarious investments for those who buy or loan on them," Mr. Bergstrom said. "The original purchasers generally pay the peak prices for their properties, the values of which depreciate quickly and increasingly because of the rapid and continuing deterioration of the buildings and inevitable obsolescence of the uninteresting neighborhoods resulting from the monotonous repetition of commonplace house designs.

"The need for architectural service in connection with the construction of houses for the low income groups in the United States has long been recognized. Persons in these groups can least afford to take any risk in their investments.

"The risks that have been imposed upon them in the past were dramatically demonstrated in the experience of the Home Owners' Loan Corporation, organized to come to the rescue of owners about to lose their homes through foreclosures of existing mortgages.

"Of approximately one million homes that were refinanced by the Corporation and thereby saved to the owners, it is stated that more than 300,000 were so badly planned, constructed and equipped that they did not afford a reasonable security even for the readjusted loans and that it had been necessary to spend large sums in reconditioning the buildings to give the necessary security.

"This important discovery led logically to the conclusion that the absence of competent architectural service and competent and adequate supervision of construction were the major reasons for the home owner's distress.

"Lending institutions occupy the key positions in small house building, and are primarily concerned that the securities behind their loans shall represent sound values and not become obsolescent during the periods of the loans. It is to their interest and to the well-being of the small house owner that the houses shall be well-designed and equipped and that their construction shall be competently and adequately supervised to ensure they have been properly constructed and that sound values have been created.

"The Federal Home Loan Bank Board System embraces some 3000 banks and lending institutions throughout the United States and one of the prime reasons for the Institute's sponsorship of the program was that the Bank Board agrees to encourage the use of competent architectural services for small houses. It is hoped that the program will induce banks and other lending institutions to extend preferential mortgages or mortgage rates to the owners of homes designed by competent architects and erected under their supervision. The Bank Board has agreed that this is a reasonable thing to expect of the lending institutions if they are convinced of the efficiency of the services rendered by the architects, and the Bank Board will urge the idea upon its member and affiliated banks and lending institutions.

"If such preferred properties result, the success of the program will be as important to the future of the profession as the well-designed and soundly-constructed houses will be to their owners and to the institutions which loaned on them."

The Institute, the Producers' Council and the Bank Board, Mr. Bergstrom explained, will unite in carrying forward the Federal home building service plan for prospective home builders which has been under development by the Bank Board for three years.

"The service plan contemplates the alignment of all local factors which participate in designing, building, equipping and financing the houses to give a unified service and to eliminate overlapping functions and charges and so bring about reductions in the costs of the houses," according to Mr. Bergstrom.

"The development of the service plan will also undertake the development of standards of service and will encourage research in methods and materials calculated to bring about improvements and further reductions of costs.

"To operate the Federal home building service plan most advantageously, it is contemplated that service plan groups will be organized in various localities throughout the United States to provide the advisory, architectural, technical and other building services to the prospective home owners and builders.

"These service plan groups would logically include architects, lenders, realtors, material dealers and manufacturers, builders and public-spirited citizens. The initiative in organizing such groups should be taken by the architects.

"The Institute and the Council will endeavor to cooperate with governmental bureaus and national associations interested in the financing and building of small houses and to forward cooperative programs to bring about the objectives of the last joint endeavor. It is hoped that other agencies and associations and the building industry in general will participate."

SEATTLE CHAPTER MEETING

The February meeting of Washington State Chapter, A. I. A., was held at the Mayflower Hotel, Seattle, on the evening of February 8th.

After the usual social gathering and dinner, the meeting was called to order by President Naramore, who called upon members to introduce their guests. A letter was read from Dr. Emerson, former dean of the Architectural Department, Massachusetts Institute of Technology, now a lecturer under the Waid Fund of the A. I. A., announcing a visit to Seattle March 25.

Mr. Willatsen, chairman of the committee on domestic architecture, then introduced for discussion a recommendation in the annual committee report regarding exhibitions of domestic work by members of the Chapter, and after some discussion it was voted to refer this matter to the incoming committees on domestic architecture and exhibition in the endeavor to establish a permanent policy.

New Chapter Associates are Joseph H. D. DeHart and Philip Moore; and as Junior Associate, J. Maurice Shar.

The sketch competition drawings, for which entries closed recently with judgment immediately following, are on exhibition at the Seattle Art Museum, Volunteer Park.

SEATTLE CHAPTER WORKING COMMITTEES

The following committees have been appointed for 1940 by Washington State Chapter, A. I. A.:

Standing Committees

CIVIC DESIGN AND PLANNING—Gowen, Loveless, Alden, Vogel, Wohleb, Ahlson, Richardson, S. H.

COMPETITIONS—Stoddard, Albertson, Morrison, Whitehouse, Carleton.

EDUCATION—Herrman, Gove, Melzian, Weller, Savery.

EXHIBITION—Shorett, Johanson, Aitken, Jacobsen, Elizabeth Ayer, Durham, Anne Gould.

INSTITUTE AFFAIRS—Alden, Gowen, Bertelsen, Mock, Weller.

LEGISLATION—Bain, Pearson, Bertlesen, Vogel.

PROFESSIONAL PRACTICE—Willatsen, Holmes, Moffitt, Pehrson, Smith (S. A.), Lytel.

PUBLIC INFORMATION—Aitken, Chiarelli, Bartelsen, Bindon, Lea.

ORDINANCES—Young, Brady, Moffit, Priteca, Bringloe, Carlson, McNicoll.

MEMBERSHIP—Bain, Shorett, Olachewsky, Fey, Johanson, Overturf, Richardson (S. H.).

PROGRAM—Carroll, Carlson, Aitken, Thomas (D. P.), Elizabeth Ayer, Chiarelli, Gould (C. F.), Halfon, Lea.

WAYS AND MEANS—Priteca, Grainger, Albertson.

Special Committees

BUILDING INDUSTRY CONTACT—McClelland, Stoddard, Brady.

HONOR AWARDS—Loveless, Horrocks, Morrison, Rogers.

FEDERAL BUILDINGS—Grainger, Horrocks, Maloney, Mock, Thiry, Troast.

NATIONAL HOUSING—Holmes, Jacobsen, Shay, Fey, Osterman.

DOMESTIC ARCHITECTURE—Willatsen, Thiry, Morrison, Lytel, Turner.

ARCHITECTURAL CLUB HOUSE—Priteca, Shorett.

First and second names are chairmen and vice chairmen, respectively.

BULLETIN—Editor, Alden; Assistant Editors, Pearson, Turner.

OREGON CHAPTER COMMITTEES

The following are the 1940 committee memberships of Oregon Chapter:

Membership: Fritsch, chairman; A. Lawrence, vice-chairman; Aandahl and Annand.

Practice of Architecture: Jacobberger, general chairman. Building Code — Jacobberger, chairman; Herzog, Allyn and Hilgers. Housing Code—Wallwork, chairman; Heiler, I. G. Smith and Schneider. Mechanical Codes (Fire and Zoning)—Howell, chairman; Brookman, Boles and Kotchik. Matters Within the Profession—Legge, chairman; Church, Cash and Roehr.

Relations With the Construction Industry: Jones, chairman; Bear, vice-chairman; Angell, Whitney, DeYoung, Nielson, Runtz, Schmeer and Harrington.

Public Relations: Morin, chairman; Wallman, vice-chairman; Johnson, Butcher, Hartford, Heims, Webber, Wilson and E. F. Lawrence.

Education and Registration: Stanton, chairman; Dukehart, vice-chairman; Perrin and R. Logan.

Public Information: Johnston, chairman; Morden, vice-chairman; Hemenway, Hayslip, Bailey and Woodmansee.

Allied Arts and Exhibitions: T. Logan, chairman; Zeller, vice-chairman; Dougan, Kinne, Marsh, Turney, Foulkes and Wright.

Civic Design: Doty, chairman; Wardner, vice-chairman; Crowell, Tucker, Whitehouse, Willcox, B. Smith and Sundeleaf.

Entertainment: Wick, chairman; Hinson, vice-chairman; Barnes, Mockford, Reif and Wolff.

Highlands: Belluschi, chairman; Legge, Foulkes and I. G. Smith.

LOS ANGELES CHAPTER COMMITTEES

The following committees have been appointed for 1940 by Southern California Chapter, A. I. A.:

Construction Industries: Samuel E. Lunden, chairman; Donald B. Kirby, Charles O. Matcham, Walter C. Wurdeman.

Legislative: Earl T. Heitschmidt, chairman; Ben H. O'Connor, Robert H. Orr, Albert R. Walker, George B. Allison.

Education: Ralph C. Flewelling, chairman; Roland E. Coate, David J. Witmer, A. C. Weatherhead, H. Scott Gerity, Paul R. Hunter.

Associates: Herbert J. Powell, chairman; Breo Freeman, John L. Rex.

Professional Betterment: Donald B. Kirby, chairman; Robert H. Ainsworth, Joseph Kaiser, A. R. Hutchason, Robert V. Derrah, Graham Latta.

Public Works: Sumner Spaulding, chairman; John C. Austin, David C. Allison, Myron Hunt, Earl T. Heisschmidt, Ralph C. Flewelling, William H. Schuchardt, Palmer Sabin.

Junior Associates: C. M. Winslow, chairman; Howard C. Elwell, Stanley R. Gould, James Moreland, Jr.

Membership: Edgar Maybury, chairman; Harold C. Chambers, Reginald D. Johnson, Eugene Weston, Jr.; U. Floyd Rible.

Honor Awards: Palmer Sabin, chairman; Herbert J. Powell, H. Roy Kelley, Douglas Honnold.

Traveling Exhibits: Walter Reichardt, chairman; C. Raimond Johnson, Alfred T. Gilman, Allen G. Siple.

Housing: Eugene Weston, Jr., chairman; Reginald D. Johnson, P. A. Eisen, Henry C. Newton, C. M. Winslow, Edgar Maybury, W. C. Wurdeman.

SAN FRANCISCO ARCHITECTS MEET

The regular monthly meeting of Northern California Chapter, A.I.A., was held at the St. Francis Yacht Club Tuesday, February 27, President James H. Mitchell presiding.

Guests present included Ronald Campbell, Planning Adviser to the San Mateo County Planning Commission, the speaker of the evening; Mrs. R. A. Reynolds, president of the California Roadside Council; Mrs. Thomas J. Kent, Messrs. A. Lewis Koue, Vincent G. Raney, and Harold H. Weeks, whose applications for membership have been received; Carl H. Bessett, member of the San Mateo County Planning Commission; Professor Gregg, of the Landscape Department of the University of California; Messrs. Clark, Church, Jones, and Norris, landscape architects, and Mr. Rucker, secretary of the San Francisco Chapter of the A. S. L. A.

Mr. Mitchell introduced the various guests of the evening, and welcomed them on behalf of the Chapter.

Announcement was made of the joint meeting of the State Association of California Architects and the Chapter, to be held March 26. Gordon B. Kaufmann, Regional Director of the Institute, will be the guest speaker.

Mr. Evers discussed briefly the contemplated new type of F.H.A. loan for the rehabilitation of blighted areas caused by the removal of tenants to housing centers. He stressed the desire of the Authority that this work be done through private financing if possible, and emphasized the wish to cooperate and assist private capital in every way to accomplish this.

Upon motion of Mr. Maury, seconded by Mr. Kent, the board of directors and the president were empowered to investigate the problem and to cooperate with the Authority as they saw fit.

Mr. Mitchell spoke of the opportunity to stage an exhibit occasioned by the offer of a prominent gallery and of show window space to draw attention to the showing.

The motion of Mr. Wurster, seconded by Mr. Reimers, authorized the appointment of a committee to investigate the matter thoroughly and left the arranging of a satisfactory date to the discretion of the board of directors.

Mrs. Reynolds expressed appreciation for the California Roadside Council of the mutual sympathy and spirit of cooperation evidenced between that organization and the Chapter, and mentioned the film that is being prepared to illustrate their work and aims.

The meeting then adjourned to the club lounge, where Ronald Campbell gave a showing of motion pictures that he had taken on an extended tour of the United States for the express purpose of studying the various speed-highways and parkways in the different states.

The pictures were extremely interesting, both from the standpoints of subject matter and excellent photography. Mr. Campbell gave an informal account of his trip during the showing, emphasizing and pointing out features of interest, so that a broad idea of the work being done in the East and Middle West was obtained.

It was regretted that a larger portion of the membership was not in attendance to enjoy this fine program, which dealt with a subject in which all are interested.—J. D. Y.

5,000 ON CENTRAL VALLEY PROJECT

Employment on the Central Valley Project has passed the 5,000 mark. In the latest official report by Walker R. Young, supervising engineer for the United States Bureau of Reclamation, the total is 5,030. It includes 3,898 contractors' employees working on Shasta Dam, the Shasta railroad relocation, the Contra Costa Canal and Friant Dam; 727 Bureau of Reclamation engineers, clerks, inspectors and surveyors; and 405 Civilian Conservation Corps enrollees engaged principally in clearing the Shasta Reservoir site.

For each person thus directly employed on project construction, it is estimated at least two others are given work indirectly in the production and transportation of materials and equipment used in the construction.

Mr. Young said nearly 7,500,000 man hours of labor have been expended directly on the project since the start of work in 1937, and probably an additional 15,000,000 man-hours indirectly in California and many other states.

The latest influx of unemployed persons has been to the site of Friant Dam where the number of applicants now far exceeds the number of workers needed for early construction.

THE ARCHITECT

Pacific Coast architects will appreciate, and perhaps a few of them will take unto themselves something of a lesson, in the following contribution to the Architects' and Producers' annual meeting in Detroit by one Wm. Cory:

Most people have a lot of respect
For a man who is an architect;
And, speaking generally, though it's not the rule,
An architect is no one's fool;
But some of the architects that I have met,
When it comes to business, are awful wet;
And giving the benefit of the doubt,
They don't know what it's all about.
And when they have a chance to learn,
They all are prone their backs to turn;
And we salesmen have a sorry plight,
A-trying to keep them going right.
Just last week it was my lot to call,
On one who thinks he knows it all.
When I arrived without the gate,
I was informed that I'd have to wait,
By a snobbish jane with bright red hair;
And giving me the icy stare,
She said that Mr. So-and-so
Was in conference and she didn't know,
If he could see me at all today;
And then she asked, in a casual way,
What I wanted, and wondered then if she
Could be of service and take care of me;
And: "Have you a card? Who do you represent?"
And then this female ornament,
This Cleopatra of the Portal Guard,
When I had handed her my card,
Raised her brows and said that she,
Was afraid there was naught they could do for me;
"In the future," she said,"if we want anything
We will be glad to give you a ring."
Well, this got my goat with one fell swoop,
And I said, "You can tell Mr. Ninkinpoop,
That I came to answer his call for aid
But was stopped at the door by his buxom maid;
And one more thing you can to him tell—
If he wants me again he can go to hell!"
If I were an architect, I'd hire a girl
That had some sense and was not a churl;
I'd get a girl that was classy and sweet,
One that had manners pretty and neat;
One that was fine and free from guile,
Who would meet the salesman with a smile.
One that, when the salesmen came,
Would treat them kindly and remember their name;
Who would say in a voice, smiling and sweet,
"Just a moment and have a seat;
I'll tell Mr. So-and-so that you are here,
He'll see you in just a moment, my dear."
I would have her wear real nice clothes
And classy shoes and real silk hose;
And a skirt so short, if she happened to sneeze,
You could see the dimples 'neath her knees;
Then, if a salesman had to wait,
For an hour or two outside the gate,
He would not care at all, I am sure.
And when our architect opened the door,
The salesman would beam on him and say:
"I've enjoyed waiting for you today!"
And he'd do his best to help this man,
In every way his job to plan.
We salesmen don't tread a rosy way
As we make our calls from day to day;
And if the architect would be more kind,
To the lowly salesman he would find;
That peddlers though we all may be,
With axes to grind, we will agree;
We can help a lot in the scheme of things,
That to the architect business brings.
Far be it from me to criticize,
The game where my bread and butter lies
But I was asked here tonight
To try and set some things aright;
And what I have said does not reflect
What I really think of the architect.
It was suggested that I razz this bunch
And to put over something with a punch;
And what I have said is all in good fun,
And I've a friendly feeling for everyone.
All the architects are good friends of mine,
And everyone always treats me fine,
But what I said 'bout the gal still goes—
You ought to keep them on their toes;
Put a gal out front with a real friendly air,
That, men, will answer the salesman's prayer.

EXPULSION OF A BRITISH ARCHITECT

(From Buildings, Sydney, Australia)

Much interest will be aroused by the publication of an official notification from the Architects' Registration Council (England) of their findings that a registered architect has been guilty of conduct disgraceful to him in his capacity as an architect and that he has accordingly been removed from the Register and disqualified from registration for a period of five years. The charge against the architect concerned was that he had issued a monthly circular advertising his architectural services. This is the first case in which the Architects' Registration Council have given notice of their intention to exercise their power under the Architects' Registration Act to expel a registered architect from the Register. Under the terms of the Architects' Registration Act, 1938, a person expelled from the Register will be unable after August 1, 1940, to carry on business under the style or title of "architect."

ARCHITECT KILLED IN AUTO SMASH

Cecil A. Schilling, architect of Long Beach, was killed in an automobile accident near Coalinga, February 15. The machine overturned and rolled 200 feet after one of the wheels had come off rounding a curve.

ARCHITECTS' BULLETIN

Issued For

THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

Northern Section

STATE ASSOCIATION MEMBER
OF THE
AMERICAN INSTITUTE OF ARCHITECTS

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Harris C. Allen

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NATIONAL LEGISLATION

THERE are now pending some bills in Congress which affect the architectural profession and the building industry. H. R. 7635 (formerly H. R. 7568), reintroduced in Congress by Representative John G. Alexander of Minnesota, relating to the employment of private architects and engineers on Federal buildings is of vital interest to the profession.

The first section of the bill provides: "That for the purpose of reducing the cost of public buildings and other structures and of stimulating interest in efficient design, plans and specifications, any department or bureau having charge of building same is hereby authorized to employ competent professional engineers and/or architects engaged in private practice to prepare designs, plans and/or specifications for new buildings and other structures or to assist in preparing designs, plans and/or specifications therefor, and to compensate them for such services."

The second section of the bill continues as follows: "The said department or bureau is hereby further authorized to employ competent professional engineers and/or architects to prepare alternate designs, plans and/or specifications, hereinafter called 'alternate designs,' for new buildings or other structures which are estimated to cost $200,000 each, or more, the condition of such employment to be as follows: The government agency may, if deemed expedient, pay the out-of-pocket cost of the preparation of said alternate design, including all labor, material, supplies, general office overhead expense in connection therewith, but no compensation for or salaries of principals. The said alternate design shall be advertised and submitted for bids at the same time and under the same condtiions that the design, plan and or specification prepared by the department or bureau staff, hereinafter called 'base plans,' are advertised and submitted for bids. The alternate design may apply to the structural design or any division of the work, but the bids on the alternate design and the base plan shall be for the complete building or structure in each case and shall be compared on that basis. If the low bid or the sum of the low bids on the base plans show a gross saving to the government equal to or greater than twice the amount of the full fees of the private engineer and or architect who prepared them and including their out-of-pocket cost the government shall pay them the said full fee or fees, otherwise not more than their out-of-pocket cost as hereinbefore defined. Not more than one alternate design shall be prepared for each division of the work for each building or other structure. The alternate design shall comply with government building codes and or standards and be equal to the base plans as to strength, durability, utility and quality, all of which shall be clearly defined to the private engineers and or architects before the alternate designs are prepared.'

Comment of the A. I. A. Committee on Federal Public Works: Charles Butler, chairman:

"It has been impossible to obtain the opinion of all members of the Committee on Federal Works, but with the concurrence of the president and the

treasurer of the Institute, it is the firm belief of the chairman that the first section of the bill as quoted above, if enacted into law, will prove of real benefit to the profession and the government."

On the other hand, it is the firm belief of the chairman and the above named officers that the second section of the bill as quoted above, if enacted into law, will prove inimical to the profession, as well as to the profession of engineering and to the government.

In view of these opinions, the chairman requests the profession to urge the passage of the first section of the bill and demand the deletion of the second section entirely, and to communicate to that effect with their Senators and Congressmen, sending copies of their communication to Congressman Alexander at Washington, D. C.

The Northern California Chapter of the Institute and the Executive Board of the Association are in agreement in approving the first section and disapproving the second section of this bill. It is contrary to established good practice for architectural service to be determined on the basis of construction cost. As a matter of fact, the high cost of work under government bureau plans and specifications, and the real cost of bureaucratic service (in which the overhead is usually divided and passed along to several different government accounts) have undoubtedly caused the authors of the bill to include the objectionable features expecting the results to justify these conditions.

However, such a precedent would ruin the professional standards which have been the protection of architects.

Senate Bills 1032 and 1970

Bill 1032 is an amendment to the Welsh-Healy Public Contracts Act, regulating all public purchases over $2000 and setting serious penalties for violation of the act. Bill 1970 is the LaFollette-Thomas "Oppressive Labor" Act. Both of these bills place rigid restrictions and inhibitions on the building industry.

JURISDICTIONAL DISPUTES

A statement comes from the Building Construction Department of the American Federation of Labor that the new plan for settling jurisdictional disputes has within three months reduced requests for decisions about 90%. There is still some question as to whether a national settlement plan is better than a local one—as our pungent friend, Bill Hogue of the A. G. C., says, the national department has made some "cockeyed decisions." However, there is certainly a real gain and improvements in a system can always be made. One great reform is the fact that no stoppage of work is to be permitted while hearings and settlements are going on.

CONSTRUCTION CONGRESS

This section of the State Chamber of Commerce under the chairmanship of our own Harry Michelsen) has published a report embodying suggestions to stimulate new building construction and modernization. It is worth reading and consideration:

Encourage Sound Building Construction Practices

1. Advocate sound and truthful advertising of real estate, building materials and buildings, including new and old.

2. State the facts as to the quality of materials.

3. Real estate operators, lending agencies and financial institutions should request the services of architects, engineers and contractors when technical advice and construction costs are desirable.

4. Architects, engineers and contractors should confine their activities to their respective professions.

5. Architects and engineers should cooperate with contractors and others to determine the advisability of promoting new building projects.

6. The prospective investor should be given sound advice as to the advisability of proceeding with a construction project, thereby promoting integrity in the industry.

Conduct Surveys to Show Building Needs

1. The needs for new construction and the modernization and improvement of buildings, including dwellings in all districts.

2. Opportunities for new industries, with consideration to the natural resources and conditions that exist in the locality.

3. Determine the percentage of occupancy in office buildings, industrial buildings, manufacturing plants, hotels, apartments, residences, garages, etc.

4. Determine the number of buildings which have been condemned as fire, sanitary, structural and life hazards. (Cooperation of health and fire departments in enforcement of city and state ordinances.)

Determine Cost Information on Building Construction

1. Cost of buildings per cubic foot and per square foot for each year over a period of ten years.

2. Unit cost of materials and labor.

3. Make a composite chart showing the trend of the following during the last ten years: (a) Architectural and engineering fees; (b) Carrying charges, interest, taxes, insurance, etc.; (c) Materials; (d) Labor, based on increased efficiency due to modern methods and machinery; (e) Preliminary costs in securing a loan.

4. Better utilization of space, due to modern planning.

5. Added costs for conveniences — such as better bathrooms, heating, air conditioning systems, etc.

6. Revision of building ordinances toward economical and sound construction.

7. Encourage central bidding bureaus, to reduce the overhead costs of the general and sub-contractors.

Financing Building Construction

1. Obtain cooperation of banks and lending agencies to develop plans for financing new buildings and for the modernization and improvement of existing ones.

2. Encourage the banks and other lenders to insist on modernization and improvement of buildings for greater utility and consequent protection of loans.

3. Encourage establishment of necessary fund for the maintenance of buildings to prevent obsolescence and deterioration.

4. Advertise opportunities for sound investments in building construction.

Betterment of Labor Relations

1. Encouragement of long-term agreements, with provision for arbitration and settlement of disputes between the contracting parties.

2. Elimination of jurisdictional disputes.

3. Training of competent mechanics through definite organized apprentice training programs.

4. Use of modern machines and labor-saving devices.

5. Cooperation between labor and the investor, contractor, architect and engineer.

6. Publicize efficiency of labor, due to modern methods.

California Construction Congress—H. M. Michelsen, chairman, Northern Section; C. G. Fitzgerald, chairman, Southern Section; C. S. Knight, secretary.

JOINT MEETING

The annual spring meeting held jointly by the State Association, Northern Section, and the Northern California Chapter, A. I. A., will be in San Francisco on the last Tuesday of March, the 26th. It will be a dinner meeting, the location to be determined later.

PRACTICAL DESIGN FOR STUDENTS

Practical designs for low-cost houses, planned to help solve America's housing problem, have just been completed by forty students of architecture at Cooper Union. The student solutions, embodied in presentation drawings, working drawings, and models, are for bungalows and two-story structures, comprising from 15,000 to 21,000 cubic feet, which could be built for $5,000 to $7,000.

The plans conform with FHA standards and reveal a "gratifying diversity of design and a dissimilarity of approach," according to Esmond Shaw, assistant director of the Cooper Union Art Schools, who was in charge of the student work. All solutions reflect an honest use of building materials, Mr. Shaw pointed out, with emphasis on simplicity and economy of space.

The hypothetical site for the houses is a "level suburban lot somewhere in the Northwestern states." The size of the lot is given as 50 feet by 100 feet, with the 50 foot dimension facing north on the street.

Included in all the house plans are a living room, a dining room or dining alcove off the living room, a kitchen between 60 and 80 square feet in area, a one car garage, boiler room, two bedrooms, bathroom, four closets, front and rear entries, and a hood or porch over the front entrance.

Best among the solutions, Mr. Shaw said, was a one story design by Fred Heine of 518 Ninth Street, Brooklyn. Garage, utility room, entrance hall and kitchen are placed across the front of the house to protect the living quarters against the northern exposure. Combined living and dining space make up the center portion of the house with two bedrooms and a bathroom between them on the southern extremity. The dimensions of the living room are 16 feet by 20 feet, the dining room, 12 by 12, the bedrooms, 12 by 16 and 10 by 12.

The construction is frame with clapboards on the exterior. The garage and fireplace are brick. The roof has a slight pitch toward the north and is covered with a patented roofing material. The doors and windows are all stock sizes. The house, comprising about 15,000 cubic feet, is designed to cost approximately $5,000.

"All of the homes could be purchased on time for less than $50 a month," Mr. Shaw pointed out, "depending in which section of the country they are built. In the South, for instance, the cost would be about $4,000, while in the New York area it would vary between $5,000 and $7,000."

Esther Koivu of 14 East 16th Street, New York, and Milton Rose of 86 Elliott Avenue, Yonkers, N. Y., also executed outstanding designs, Mr. Shaw said.

Miss Koivu's two-story house plan calls for cinder block construction around the garage and chimney, and frame elsewhere. To the left of the entrance hall is the kitchen and utility room and the stairs to the second floor. On the right is the entry into the living room. The garage is attached to the front of the house. The dining room, facing south, is combined with the living room and opens on a dining porch. The two bedrooms on the second floor have a southern exposure. The dimensions of the living room are 13 feet by 17 feet the dining room, 9 by 10, the bedrooms, 13 by 15 and 10 by 12. Comprising about 21,000 cubic feet the house would cost approximately $7,000.

In Mr. Rose's design an economy is affected by having the partitions on the first and second floors lined up with each other. As in the other designs the combined living and dining space and the two bedrooms have a southern exposure. A departure is a basement room under the kitchen to house heating equipment. The dimensions of the dining room are 12 feet by 13 feet, the living room 13 by 21, and the bedrooms 13 by 17 and 13 by 14.

The first floor is constructed of cinder blocks and is painted on the exterior. The second floor is frame with clapboard finish. The house contains 21,000 cubic feet and could be built for approximately $7,000.

"I feel that the students have made a significant contribution to American housing," Mr. Shaw said. They have dealt with one of the principal problems in the architectural profession in a constructive fashion. Their work shows awareness by young architects of one of the greatest needs in the field of American housing and indicates that the home building of the future will rest in capable hands."

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

348. WESTERN PINE

"Economy Sidings In Western Pines" is the title of a brand new booklet received from the Western Pine Association. It is sure to please with its nice illustrations and interesting text. Some clever ideas in the treatment of modern houses are to be found in this booklet. Send for your copy by using the handy coupon.

349. TIN

A new Quarterly Review of "Tin and Its Uses" is just out. This one deals with white bronze plating and thick tin lining. This is an exceptionally interesting number.

350. PLATE GLASS

From the Pittsburgh Plate Glass Company comes a booklet, "Pittsburgh Plate Products," filled with information concerning this company's various lines of paint and glass. This booklet is a regular publication with the company and each issue is given to information of interest to the building profession.

351. BETTER LIGHT

Acme Electric and Manufacturing Company have a booklet detailing the various types of working lights manufactured by them. They have called this new book "Light For Work." It will be worth giving some attention to. The coupon will bring your copy.

352. COPPER AND BRASS

Another one of those well-worthwhile bulletins of The Copper and Brass Research Association. This one devoted to views and data on installations from the Atlantic to the Pacific Coast. Send for a copy by using the coupon below.

353. HARDWOOD LUMBER

An old friend whom this page has not seen for a long time is back again —E. L. Bruce Company's little magazine devoted to fine lumber and its products. There is always something of interest to be found in the pages of this little booklet.

354. WASHING MACHINE

The Kelvinator Division of Nash-Kelvinator Corporation announce a new line to add to their already extensive one in building equipment. This is a new 1940 washing machine. Send the coupon for detailed information.

355. BUILDERS' HARDWARE

Yale and Towne Manufacturing Company, through a broadside by their agency announce a "New Tubular Lock Line"; available for house use and made up in latch and lock sets for all types of doors. The company will have further data for issue upon request. Send in the coupon.

356. WEATHERPROOFING

A new low-cost, weather-tight window unit for home construction is announced by means of a broadside from the Easy Glide Manufacturing Company. This company has had some very interesting material describing their various products from time to time.

357. FOR AUTO COURTS

"Greater Comfort For Guests" is the title of a booklet illustrating and describing plumbing equipment for automobile tourist courts, by Crane Company. Herein are all the plumbing needs for such a layout. Send for your copy—use the coupon.

358. AUTOVENT FAN

Autovent Fan and Blower Company have an interesting pamphlet illustrating their Autovent "V" Belt Drive Unit Blowers. There is much performance data given in this pamphlet which will be of interest to ventilation engineers and contractors.

359. PLYWOOD

Plywood Handbook put out by the United States Plywood Corporation, is one of the outstanding brochures so far this year. It has detailed drawings, sketches, and plans for the use of plywood and the text rounds out a valuable addition to the literature on this product. Send for this booklet by using the coupon.

360. ENGINEERING PROGRESS

Westinghouse has issued a very fine booklet, "Engineering Progress," which has a wealth of information detailed with great care and illustrated profusely. Here the latest advances by this company in the fields of engineering are described and the newest equipment shown.

361. CONCRETE BROCHURE

"Architectural Concrete," a very fine booklet illustrating the outstanding concrete construction jobs throughout the nation, is at hand with a fresh series of interesting concrete building projects. Published by the Portland Cement Association.

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352 ☐	359 ☐
353 ☐	360 ☐
354 ☐	361 ☐

My Name.....

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A BILLION BUILDING BRICKS

More than one billion building bricks—an amount sufficient to build a high wall spanning the continent from New York to San Francisco— will be utilized in the construction of low-rent dwellings under the slum-clearance program of the United States Housing Authority, according to estimates made public by USHA Administrator Nathan Straus.

Approximately 230,000,000 lineal feet of structural hollow tile—a total of 43,560 miles or nearly twice the distance around the earth at the equator—will give added safety and sanitation for the 170,000 low income families who will move into the new homes from their present shacks and tenements in the Nation's slums and blighted areas.

In addition there will be put to use about 400,000,000 feet of lumber; 3,000,000 tons of sand and gravel; 8,000,000 barrels of cement; 800,000 tons of gypsum plaster and 1,500,000 gallons of paint—to mention but a few of the many items that go into the construction of low-rental housing projects.

A complete breakdown of the enormous quantity of building materials and equipment, for which there will be an estimated outlay of $280,000,000 in the present $770,000,000 public housing program, was submitted by USHA technical experts to point out the vast benefits to be derived by the whole building industry.

Approximate quantities of building materials and equipment to be used are as follows:

Item—	Quantity
Brick	1,000,000,000
Cabinets (Kitchen)	160,000
Cement	8,000,000 barrels
Conduit and tubing (electrical)	54,000,000 feet
Doors	1,200,000
Flue lining	300,000 feet
Glass (window)	12,000,000 square feet
Gravel and stone	3,000,000 tons
Gypsum plaster	800,000 tons
Heaters and tanks (domestic hot water)	60,000
Insulation	5,000,000 feet
Lighting fixtures (electrical)	1,300,000
Lumber (boards and miscellaneous)	120,000,000 feet
Lumber (Dimension)	130,000,000 feet
Lumber (Form)	150,000,000 feet
Masonry units (cement)	39,000,000
Paint	1,500,000 gallons
Pipe (sewer)	7,000,000 feet
Piping (heating)	13,000,000 feet
Piping (inside plumbing)	19,000,000 feet
Plumbing fixtures	644,000
Quicklime	150,000 tons
Radiators (heating)	310,000
Ranges (kitchen)	160,000

TERMITES ATTACK BUDGETS TOO

Do you find "extras" playing havoc with the building budgets you arrange for your clients? After construction is started, do your clients harass you with suggestions for changes and additions that upset your carefully planned building budget?

One of the changes architects and builders are almost invariably asked to make, is in the electrical service. The owner suddenly realizes that no provision was made for a permanent outlet for the refrigerator, or for the mantle clock, or for the upstairs radio, or something else, and will want one or more outlets added. Or perhaps after the installation is half completed someone will discover that a three-way switch is not provided where it is needed.

These are last-minute changes that put gray hairs in the architect's head and necessitate troublesome adjustments in his building budgets.

There are no such irritating afterthoughts and changes for the architect using the Red Seal Adequate Wiring plan. It is a minimum standard to be applied to all small homes, and any amount of additional service can be included. It is meant as a guide to be sure that nothing vital is overlooked.

A single sheet of specifications is printed on heavy paper suitable for architect's use. If you do not have your copy, 'phone or write and one will be sent you free.

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Refrigerators	160,000
Roofing felts	200,000,000 square feet
Sand	4,000,000 tons
Shade cloth	12,000,000 square feet
Sheet metal (Duct systems and breeches—heating)	2,000,000 pounds
Steel (structural and reinforcing)	275,000 tons
Tables (kitchen)	160,000
Tile slate and shingles	30,000,000 square feet
Tile (structural)	230,000,000
Windows (steel)	500,000
Windows (wood)	500,000
Wiring (inside electrical)	215,000,000 feet
Wiring (outside electrical)	8,600,000 feet

OREGON CHAPTER ANNUAL DINNER

Sixty-eight members and guests attended the 29th annual dinner meeting of Oregon Chapter, A. I. A., at the Congress Hotel, Portland, the evening of January 22. After earlier arrivals had viewed the skillful cartoons and finished mosaic murals of Aimee Gorham on exhibition, President Stanton called the business meeting to order.

Following the reading of committee reports, Mr. Morin asked if the civic design committee had any information regarding the Stearns' Memorial Fountain question. Mr. Tucker, newly-appointed member of the Portland Art Comisison, stated that a meeting of this commisison was scheduled to discuss the question and asked for the Chapter's opinion. After discussion, the Chapter voted in favor of a competition.

The competition question being brought up, Mr. Jacobberger asked if the Chapter proposed to do anything about the government competition recently announced for the Tacoma Federal Building, and inquired of Mr. Aandahl (Western Mountain member of Institute's Competition Committee) if this competition —limited as it is—was oked by the Institute. Director Fuller was asked to reply and stated that although the Institute did not look with favor on these limited-service government competitions they did not feel that the membership should be forbidden entering and thereby lose what little ground had been gained in forming an entering wedge in bureaucratic architecture. In answer to a motion proposed by Mr. Jacobberger, Mr. Fuller stated that this, or any other Chapter, could not restrict its membership from entering — such powers being delegated only to the Institute Board. Thereupon, Mr. Jacobberger motioned, Mr. Aandahl seconded, that Institute be advised of the Oregon Chapter's disapproval of such limited-service, limited-fee competitions as the government is now conducting. So ordered.

Mr. Morin, as retiring secretary, made a report more in the form of suggestions for possibilities of future enhancement of the Chapter's activities and in so doing named likely candidates for Institute membership and

Chapter associateship. This bald listing of names precipitated a controversy which ended in the report being turned over to the incoming executive committee with power to act.

The following officers were elected: President, Glenn Stanton; vice-president, Pietro Belluschi; secretary, Ernest Tucker; treasurer, Francis B. Jacobberger; trustee, Roi L. Morin.

After a brief cocktail hour members and guests sat down to dinner about 7:30, Mr. Jacobberger presiding as toastmaster.

Chapter guests were introduced and spoke briefly and new 1939 associates (six in number) were asked to stand and be felicitated.

President Stanton then made presentation of an engraved sterling silver Chapter Honorary Associate membership card to Mrs. Aimee Gorham for her outstanding achievements as an artist and creator of wood mosaic murals. Mrs. Gorham thanked the Chapter and replied graciously.

Folger Johnson, the newly appointed FHA director for Oregon, was asked to say a few words and replied that he wanted the Chapter's cooperation to enable him to carry on the work so ably done by Jamieson Parker.

Harrison Whitney, who so recently convalesced from a serious illness, was congratulated for attending the dinner. Harold Doty made another of his "serious" talks on the future of architecture.

Director Fuller was then introduced and gave an interesting and inspiring talk on the Institute—its precepts, activities, and what it means and stands for in American architecture — stating that although only some 3000 of the 10,000 or 12,000 practitioners belong, its membership roll encompasses almost every important name in architecture in the United States.

QUALITY PLUMBING FOR THE SMALL HOME

A new 16 page illustrated booklet devoted to the interests of small home builders and remodelers is announced by Crane Company, entitled "Quality Plumbing and Heating Equipment for the Small Home."

National attention to a greater degree than ever before will be focused this year on low cost housing, and Crane Company is offering through plumbing and heating contractors all over the country a line of equipment ideally suited to this market. This line of equipment for the small home is backed by Crane's 85 year reputation for quality in materials and precision in workmanship.

A copy of the booklet will be sent upon request addressed to Crane Company, 836 South Michigan Avenue, Chicago, Illinois, or to the nearest Crane Company branch.

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BOOK REVIEWS

ELECTRIC WIRING: By W. S. Ibbetson. Spons, Publishers; London, England. Price: $2.50.

A standard book on electrical wiring, installations and the various problems and modern practices. The author has attempted to make as clear as possible these theories and practices and to this end has written a concise little book for general reference work. All phases of switches, fuses, wiring, motors, etc., are set forth and the book should be of value to electrical contractors and dealers.

MACRAE'S BLUE BOOK: Edited and published by MacRae's Blue Book Company, 18 East Huron Street, Chicago, Ill. Price: $15.00.

This is the forty-seventh annual edition. The established pattern has been followed, though there has been the customary revision. There is provided here a complete index of manufacturers, wholesalers and their local distributors, with a carefully indexed classified list of banks, warehouses, railroads and a list of trade names. MacRaes should occupy a place in every business and professional office of the building industry.

HOW TO DESIGN AND INSTALL PLUMBING: By A. J. Mathias, Jr. American Technical Society, Chicago, Ill. Price: $3.00.

This is one of the Technical Society's "How to do it" books, which have proven so popular, and for which there is always a request. This book details all the "Hows" of modern plumbing and covers the field in a concise and easy-to-follow manner. Should prove of value to the plumber as a hand book and guide for quick reference. The book is well illustrated.

STAIR BUILDING: By Gilbert Townsend. American Technical Society, Chicago, Ill. Price: $2.00.

The writer of this book is one of the outstanding authors of carpentry. His other books have been instantly successful and he writes so that the average layman can understand and does not find himself completely at sea in the middle of the book. Stair building is one feature of the construction of a home that demands care and forethought and a handy book of reference, giving all the details of good workmanship, styles, types, etc., is a book of distinct value to its owner. Here is such a book, and again it is one of the "How To Do It" series.

INTERIOR ELECTRIC WIRING AND ESTIMATING: By Albert Uhl, Arthur Nelson and Carl Dunlap. American Technical Society, Chicago, Ill. Price: $2.50.

A decidedly valuable book for the architect as well as the contractor. The former so often wishes to turn to a ready reference book when starting a set of specifications and here at his hand is such a volume. Contains data set forth with exactness and clarity.

New Developments in Sliding and Folding Doors and Moveable Partitions

AN E. C. Pitcher folder containing new details of disappearing doors has been issued with models arranged for class A buildings down to the five room bungalow, where saving of space is accomplished with very little cost.

Three models of sliding door frames and hangers are manufactured to suit all classes of buildings—one of steel, for class A construction; one of part steel and wood, and one of wood—all at a very low cost compared with the saving in floor space. Any of these fixtures may be placed in the ordinary 5¼ inch partition.

All of these door hangers have the adjustable feature so essential in raising and adjusting the door; also have 3 inch ball bearing wheels, lubricated under pressure, that run almost noiselessly, with just a touch of the hand.

Pitcher sliding door hardware can be used on any width of door, using the heavy duty style for heavy doors.

Tandem doors and folding or accordion doors are among the styles manufactured.

Pitcher sliding door hardware, handled by the trade, and described above, is manufactured by the E. C. Pitcher Co., 557 Market Street, San Francisco.

ARCHITECTS' BILL FAVORED

The Executive Committee of Southern California Chapter, A. I. A., has received notice that a bill has been introduced in Congress by H. F. Alexander of Minnesota which will enable any department of the national government to engage architects and engineers in private practice to design or assist in the design of government buildings. The bill further provides that any department may engage architects and engineers to prepare alternate designs in the interests of economy.

The bill is known as H. R. 7635 and is now before the House Committees on Buildings and Grounds and Appropriations.

Members are urged to write the Congressman from their respective districts recommending the adoption of this bill.

PLANS FOR A.I.A. CONVENTION

Hundreds of architects, industrialists, and educators will assemble in Louisville, Ky., on May 21 to participate in the seventy-second national convention of the American Institute of Architects. Housing, city planning, and other national problems will be discussed in sessions lasting four days.

The Producers' Council, organization of the country's principal manufacturers of building materials; the Association of the Collegiate Schools of Architecture, and the National Council of Architectural Registration Boards will convene concurrently with the Institute.

The Kentucky Chapter of the Institute, of which Elliott Lea of Louisville is president, will be host to the delegates. Seventy-one Chapters of the Institute, located in all parts of the country, will send representatives. The directors of the Institute will meet on May 19 and 20, Edwin Bergstrom of Los Angeles, president of the Institute, presiding.

Developments in the architectural and the construction fields, state and municipal works, Federal public works, industrial relations, building costs, preservation of historic buildings, national preparedness, foreign relations, registration laws, and education are among the topics to come before the convention, in which many of the nation's leading architects will take part.

Reports will be received on the progress of a nation-wide movement to raise the standards of design and construction of small homes, which is being carried out by the Institute and Council in cooperation with the Federal Home Loan Bank Board. Plans to extend a protective building service to small home owners in every locality in the United States will be developed.

Committees of Kentucky architects are making arrangements for the convention, which will include a program of social events and public ceremonies, and trips to points of historic interest.

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FEBRUARY BUILDING TOTALS

February building records for the Northern California District, covered by Architect's Reports, totaled $37,-31,065 as compared to $39,014,298 in January. Government work predominated under the caption of "Projects Out For Bids But Not Awarded." Summary:

Plans in Preparation, February, 1940

Apartments	$ 15,000	
Residences	268,000	
City, County and State	665,000	
Schools and Colleges	1,922,000	
Churches, Clubs, etc.	220,000	
Office Buildings	275,000	
Stores and Markets	281,000	
Industrial	2,465,000	
		$ 6,101,000

Projects Out for Bids, But Not Awarded

Residences	$ 168,894	
City, County and State	333,000	
Government	24,186,968	
Schools and Colleges	588,000	
Theaters, Clubs and Hotels	302,000	
Office Buildings	70,000	
Stores and Markets	100,000	
Industrial	240,000	
		$25,988,862

Contracts Awarded

Apartments	$ 625,600	
Residences	271,000	
City, County and State	1,186,608	
Government	1,116,795	
Schools and Colleges	731,773	
Theaters, Churches, etc.	451,901	
Office Buildings	60,000	
Stores and Markets	280,065	
		$ 5,272,065
		$37,361,927

ROSENBERG TRAVELING SCHOLARSHIP

The president and the board of directors of the San Francisco Art Association announce they will receive written applications for the first Abraham Rosenberg Traveling Scholarship award.

To foster art in America, the late Abraham Rosenberg bequeathed in trust to the board of directors of the San Francisco Art Association, an endowment fund to be given in scholarships to gifted students for extended study in the fine arts. Its purpose is to assist exceptional persons who have already demonstrated their ability to accomplish distinguished creative work of professional standing.

Although the scholarship is intended for study abroad, it is not strictly limited to this field. Applicants desir-

ing to pursue special research in this country will be considered.

General terms of the scholarship require that the applicant shall have been registered in the California School of Fine Arts for at least two semesters, and shall have completed original work in any of the following: painting, sculpture, mural projects design, or research in technical or archaeological fields, experiments in new materials, techniques or processes directly related to the Fine Arts. Applicants shall be between the ages of 25 and 35 years of age, although exceptional persons over 35 years will be considered.

A committee of selection will examine applicants. The board of directors will then make the award and will determine the amount of the scholarship according to the requirements of the selected applicant's program.

Applicants must apply for scholarships in accordance with instructions contained in a form which will be supplied by writing to the San Francisco Art Association, 800 Chestnut Street, San Francisco. The closing date for receiving applications will be June 15.

SAN FRANCISCO'S NEED FOR HOUSING AND SLUM CLEARANCE

(As set forth in the local Housing Authority's Application to the Federal Works Agency, Washington.)

With three USHA-aided projects already under construction and another in the blueprint stage in its $16,600,000 slum clearance and low-rent housing program, San Francisco last month received approval of a loan contract for another development to relieve an increasing shortage of decent dwellings for its low-income families.

The projects in the construction stage are "Holly Courts," 118 dwelling units; "Potrero Terrace," 469 units, and "Sunnydale," 772. "Bernal Dwellings," which is scheduled to go into construction this summer, will consist of about 228 dwellings, and the latest project will provide for about 278.

The development for which the latest loan contract was approved will consist of three-story apartment buildings of fireproof construction and with equipped bathrooms and kitchens. Community and management space will be provided in the dwelling structures and there will be surfaced play areas for the children.

On the basis of information from the current WPA Real Property Survey, it is estimated that there are 75,000 families in San Francisco who now live under sub-standard housing conditions.

San Francisco has grown rapidly in recent years, with private enterprise failing to meet the increasing need for decent homes at rents which low-income families can afford to pay.

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THE BUILDING OUTLOOK

"If the usual time sequence in following eastern changes holds true, the present building uptrend in the East will reach the Coast this spring to register a normal increase," is the opinion of Gordon B. Kaufmann of Los Angeles, director of the Sierra Nevada District, A. I. A.

"Government spending will continue to be a factor on the Coast, particularly in Army and Navy activities," he continued. "Several large public projects in the San Francisco area are now in the bidding stage and more are hoped for up and down the Coast. Running into millions of dollars, these projects will give rise to benefits which will be reflected in labor and, to some extent, in industrial and commercial construction.

"In the Northern California area, varying forecasts are heard on housing. Some interests predict a 25% drop. Others, directly in the construction and selling fields, predict a 25% to 40% increase. In the southern district it is the consensus of opinion that the latter prediction is more nearly factual.

"Large scale housing is making headway, and with its attendant slum clearance will wield a strong influence. The constant effort to reduce building costs as an inducement to buyers should keep the market steady or improved.

"Private home construction of the type having full architectural service has been low during the past year. It will probably continue to be held back, despite the need for it, until all factors in the building industry — architect, contractor, realtor, banker, manufacturer and dealer—coordinate their endeavors to produce the low cost house.

"However, whether low cost construction is quickly achieved or not, each year in passing adds obsolescence to old structures and the influx of newcomers to the Coast widens the group which must find new habitations. Some increase in this type of dwelling may be expected as a forced necessity."

During the past year, which was notable not only for increased activ-

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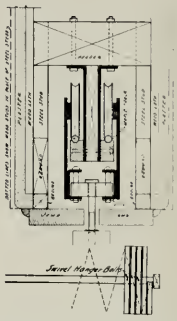

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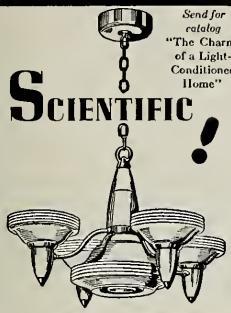

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ity but for higher standards of construction throughout the district, the trend has been toward more and better homes in the medium and low price brackets, Mr. Kaufmann says. In the larger cities, such as San Francisco and Los Angeles, particularly the latter, there has been a decided increase in industrial and commercial structures, he points out.

"With regard to residential work," Mr. Kaufmann adds, "it is apparent that more thought is being given to design and the appropriateness of the building to its surroundings. There has been a growing tendency toward the use of new materials such as glass blocks and plastics. More attention is being given to improvements in mechanical equipment. Even homes in the lower price brackets are being equipped with more adequate and flexible heating and ventilating systems. The use of insulation against both heat and sound is becoming more prevalent.

"During the past year, especially in the Los Angeles area, there has been considerable speculative building, particularly in the field of apartment house construction. These apartments have been of good design, well built and with up-to-the-minute appointments. The fact that a recent survey shows an average of 18% vacancy in apartments at this time of the year indicates that the field is over-built, with the result that there will probably be little activity in apartment building for a year or more.

"In the commercial and industrial field, the tendency in design has been definitely toward the functional and conservatively modern type of construction. In the design of buildings for commerce and industry there has been a noticeable increase in the attention that is being given to illumination and air-conditioning, both in the interest of production and personnel."

Aside from stimulating activity in limited fields of construction such as the aviation industry, the European war will exercise no major influence on Pacific Coast building conditions, Mr. Kaufmann holds. Should the United States become involved, how-

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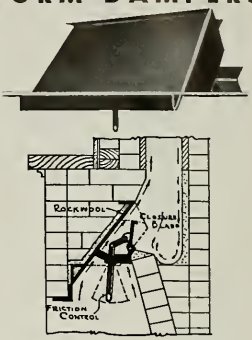

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$2,500,000 STEEL CONTRACT

A contract for the construction of the double-deck superstructure of the Pit River Bridge, closing link in the 30-mile railroad relocation being constructed around the Shasta Reservoir site, Central Valley Project, California, has been awarded to the American Bridge Company of Pittsburgh, subsidiary of the United States Steel Corporation, for $2,588,354.

The contract covers the furnishing and erecting of 19,540,000 pounds of silicon steel and 13,650,000 pounds of carbon steel in the 13 bridge spans, 1,030,000 pounds of cast-steel pins and rockers, placing 1,300,000 pounds of steel reinforcement bars, and laying the railroad floor and tracks on the lower deck and the four-lane concrete highway and the two 2½-foot walkways on the upper deck. The Bureau of Reclamation, in charge of constructing the entire Central Valley project, will provide for the transportation of the steel to the bridge site, about 14 miles north of Redding, California.

This combination railroad and highway bridge, to be the highest double-deck bridge in the world, will carry two main line tracks of the Southern Pacific Railroad and four lanes of U. S. Highway 99 across an arm of the future Shasta Reservoir. Northbound trains will pass on to the bridge directly from a half-mile tunnel bored through Bass Hill on the south side of the Pit River Canyon, which will become an arm of the reservoir.

The bridge, two-thirds of a mile long, will include a central cantilever structure having a main span 630 feet long and two anchor spans 497 feet long. In addition, there will be three truss spans of 282 feet, two truss spans of 141 feet and five plate girder spans between 140 and 150 feet in length. The girders will support curved highway approaches at either end.

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THE 1940 CENSUS OF POPULATION

The greatest fact-finding undertaking in the nation's history is slated to take place next month, when the Sixteenth Decennial Census of the population of the United States will be conducted. The year 1940 brings the 150th anniversary of census-taking in America, which began in 1790 as provided by Article I, Section 2 of the Constitution. This year's version of the census, however, is a far cry from the initial counting when, after a year and a half of work by the U. S. marshals, who conducted the original enumeration, Congress was informed that the population of the country was somewhat under four million, the numbers being reported by states to provide a basis for apportioning membership in the House of Representatives.

This April 120,000 census enumerators will visit 32,000,000 families, to enumerate the nation's estimated 132,000,000 population, and to ask a series of questions designed to give the facts which will provide illuminating data on problems which have become particularly pressing in the last decade. Vital new statistical knowledge on education, mass migration, employment, unemployment, occupation and wage and salary income, and by means of modern computing devices, preliminary summaries of the basic facts will be made available at an early date.

Processing the mass of "raw" figures to be collected will involve the services of more than 7000 clerks and a huge battery of mechanical tabulators at the Washington headquarters of the Bureau of the Census. Every effort wil be made to get the end-product — the tabulated results of the national inventory—to the public at the earliest possible moment.

A count of the population and its distribution remains the basic purpose of the inquiry, but in line with the axiom, "New times, new problems," the schedule of questions covers a broader field than could have been foreseen in 1790.

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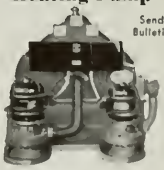

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ENGINEERS RECEIVE HONOR AWARDS

The first meeting of the year of the San Francisco Section, American Society of Civil Engineers, was held in the Engineers Club, San Francisco, Tuesday evening, February 20.

The guest speaker was Dr. Stephen P. Timoshenko, Professor of Mechanical Engineering, Stanford University. Dr. Timoshenko recently received the Lamme Medal for being "the outstanding teacher of engineering," the award being made by the Society for the Promotion of Engineering Education. The talk was illustrated with lantern slides, and the subject was "European Research Laboratories of Engineering Mechanics."

There were more than 200 members and guests present. Harold B. Hammill presided.

Charles H. Lee was awarded the Norman Medal for his paper entitled "Selection of Material for 'Rolled-Filled Earth Dams.' " This is the highest honor awarded by the National American Society of Civil Engineers.

One of the most active committees of the Section is the Soil Mechanics and Foundation Committee, of which T. P. Dresser, Jr. is chairman.

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(Continued from Page 21)

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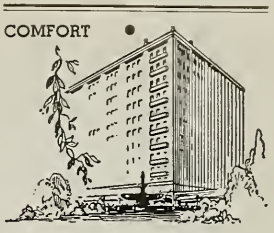

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A NEW FEATURE....

★ Beginning with the April issue and continuing each month thereafter ARCHITECT AND ENGINEER will publish an eight to twelve page sepia insert featuring a portfolio of architectural details and measured drawings.

★ Next month's Portfolio will include photographs from the office of John E. Dinwiddie, of San Francisco, whose work has several times won nation-wide recognition.

★ Each month a group of favorite details of some prominent Pacific Coast architect will be shown in the same attractive manner.

LILLIPUTIAN HOMES AT THE 1940 FAIR

Lilliputian homes, over 150 of them, will be the central feature of a complete miniature town that will be on display in the Homes and Gardens Building, at the 1940 Golden Gate International Exposition.

The model homes will show exterior architecture of the homes and gardens in complete detail. Grouped around this central motif will be arranged exhibits of all the interesting equipment that is now available for modern homes.

New features of the building trade such as stainless steel, Venetian blinds, electric eye garage doors, modern hardwoods and metals, new glass materials and a host of other gadgets for bathroom, kitchen and garden will be displayed.

In the Lilliputian town will be constructed a model modernized replica of some unnamed San Francisco city block to serve as the shopping center of the model community.

Complete in every detail, the exhibit will occupy 2500 square feet in the Homes and Gardens with more space devoted to manufacturers exhibits.

Sponsoring the exhibit are the American Institute of Architects, the Associated General Contractors and the Chamber of Commerce.

TO REFLOOD KLAMATH LAKE

The Bureau of Reclamation has released a synopsis of its report of an investigation into the problem of reflooding a portion of Lower Klamath Lake, in extreme Northern California, and of providing better regulation of the water surface of Tule Lake.

The program outlined would require special legislation before it could be made effective. The report indicates that the work called for would require $974,773, and that revenues from lease of pasture lands would repay the cost in about 12 years.

A major consideration in drafting the plans was to improve Tule Lake sump as a bird refuge and to restore Lower Klamath Lake as a wild waterfowl breeding and feeding grounds. The Biological Survey co-operated in the survey.

The reflooding of Lower Klamath Lake by pumping from Tule Lake would curtail dust storms which now afflict the southern end of the Klamath Federal Reclamation Projection and would provide water for irrigation of some rich pasture lands near Lower Klamath Lake.

BETTER EACH MONTH

A Los Angeles landscape architect writes: "I must congratulate you upon the splendid advance you are making with the magazine. Each month it seems better."